S. HRG. 100-354 PT. 2

DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1988

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

ON

H.R. 2890

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1988, AND FOR OTHER PURPOSES

PART 2 (Pages 1-866)

DEPARTMENT OF TRANSPORTATION
GENERAL ACCOUNTING OFFICE
INTERSTATE COMMERCE COMMISSION
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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CONTENTS

THURSDAY, APRIL 9, 1987

Page

Interstate Commerce Commission 1

Department of Transportation:

  Research and Special Programs Administration 91

THURSDAY, APRIL 23, 1987

Department of Transportation:

  U.S. Coast Guard 167

THURSDAY, APRIL 30, 1987

Department of Transportation:

  Urban Mass Transportation Administration 309

Washington Metropolitan Area Transit Authority 451

THURSDAY, MAY 7, 1987

General Accounting Office 505

Department of Transportation:

  Federal Aviation Administration 535

FRIDAY, MAY 8, 1987

General Accounting Office 573

Department of Transportation:

  Federal Aviation Administration 605

DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1988

THURSDAY, APRIL 9, 1987

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:10 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Frank R. Lautenberg (chairman) presiding.

Present: Senators Lautenberg, Chiles, D'Amato, and Cochran.

INTERSTATE COMMERCE COMMISSION

STATEMENT OF HEATHER J. GRADISON, CHAIRMAN

ACCOMPANIED BY:
JOHN F. HENNIGAN, JR., CHIEF OF POLICY
EDWARD E. GUTHRIE, MANAGING DIRECTOR

OPENING REMARKS

Senator LAUTENBERG. This Subcommittee on Transportation will come to order. The apologies of the chairman to the witness. I come from a business community, and there we usually start on time; but I never had four meetings at the same moment as I did this morning. I attended three, and you, unfortunately, Madam Chairman, had to suffer for that. So please forgive me.

Today the committee is going to consider the budget proposals for the Interstate Commerce Commission [ICC] and the Research and Special Programs Administration [RSPA].

The administration's request for Research and Special Programs Administration totals $22,643,000 and 706 positions. It represents an increase of $2,693,000 and six positions over the amount enacted for the current fiscal year. RSPA is another of those small transportation agencies with very important responsibilities. In addition to providing general support for the Departments of Research, Data Collection and Analysis, the RSPA also has vital program responsibilities in the regulation of hazardous material transportation and pipeline safety.

I seriously question whether this administration takes its responsibilities as seriously as it should. Its responses are often too little too late. For example, the General Accounting Office and the OTA, Office of Technology and Assessment, have both emphasized the need for a comprehensive registry of shippers, carriers, container manufacturers and others involved in the transport of hazardous material. The Secretary's Task Force on RSPA, however, recommended a pilot registration program, and that is what RSPA is.

It is hard to enforce regulations if you do not know who should be covered by them. The administration has also been seeking to shift enforcement responsibilities in this area to the states as much as possible, but it is far from clear if the states have the capacity to carry on an effective enforcement program. In fact, much of RSPA's efforts seem to be directed at trying to persuade the states to develop their capabilities so they can take over the enforcement function.

We are going to be exploring these and other issues today with Ms. Cynthia Douglass, the Administrator.

Our first witness this morning, however, is Chairman Heather Gradison of the ICC, and before we start I would like to wish you and the employees of the ICC a happy 100th birthday. I guess you could have gotten on Willard Scott's program, the "Today Show." He always congratulates those who have a 100th year birthday.

The ICC is the nation's oldest independent administrative agency. President Cleveland in February 1887 approved legislation now known as the Interstate Commerce Act to regulate commerce. The original enabling legislation was a reaction to the public's concern about certain railroad practices, including captive shipper rates, secret contracts for preferred customers and collusion among railroads regarding the routes used and the pooling of traffic.

In its history, the ICC has regulated railroads, motor carriers, pipelines, water carriers and even for a brief time telegraph, telephone and radio communications. The ICC, however, after years of expanding regulation and regulatory power saw its influence reduced considerably with the enactment of the Staggers Rail Act, the Motor Carrier Act, and bus deregulation.

As the ICC celebrates its 100th birthday, the question is, How many more birthdays will it celebrate? The administration has once again proposed to sunset the ICC. The committee today will hear Chairperson Gradison explain that proposal and what the Commission's needs will be for fiscal year 1988 absent the enactment of sunset legislation.

Before we call on you, I would ask my distinguished colleague from Florida whether he has any opening statement or comments.

Senator CHILES. I am going to reserve my opening statement so we will have time for questions.

Senator LAUTENBERG. I thank the distinguished Chairman of the Budget Committee, who looks not at all fatigued from his engagements over the budget and his successes, even though they may only be temporary.

Ms. Gradison, please

STATEMENT OF HEATHER J. GRADISON

Ms. GRADISON. Good morning, Mr. Chairman, Senator Chiles. It is good to see both of you. Having lived in the great state of New Jersey——

Senator LAUTENBERG. I did not know that. I would have said nicer things. [Laughter.]

Ms. GRADISON. It is indeed the Garden State.

Thank you for inviting me here today. Before we discuss the Interstate Commerce Commission's fiscal year 1988 appropriations request, I would like to highlight some of the Commission's recent actions and plans for the immediate future.

The Commission has dealt with a number of very difficult policy issues in the past year, particularly in the rail area: revenue adequacy, product and geographic competition, competitive access, rail cost adjustment factor and cost recovery procedures, boxcar joint rates, tank car mileage allowances, shortline acquisitions, and securities exemption.

In addition, a number of significant cases were decided: the Powder River construction case, the San Antonio coal rate case, the Santa Fe/Southern Pacific merger case, the Omaha Public Power rate case, and the nuclear fuel rate case.

We focused our resources on coal rate cases, and we are now preparing to move on the noncoal rate docket. Additional public comments have been requested on a proposed rule addressing noncoal rates. We are committed to clearing out the existing rail rate cases.

In the motor carrier area, the Commission dealt with two key issues: the liability insurance crisis and the National Industrial Transportation League petition to institute a rulemaking on negotiated rates. The Commission issued interim rules to allow motor carriers to file for self-insurance. Currently, 48 cases have been filed, a total of 17 applications were granted, 8 denied, 5 withdrawn, and 18 pending. Final rules on self-insurance were served on February 5, 1987.

In the petition on negotiated rates, the Commission decided that, upon court referral, the Commission would recommend whether equitable relief should be granted to a shipper when an agreed-upon rate is not filed by a carrier. We are continuing to expeditiously process cases filed under these proceedings and others on our motor carrier docket.

In addition, administrative efforts have concentrated on eliminating forms and significantly reducing the hours spent completing them. We reduced office space by over 40,000 square feet and streamlined our field and regional office structure. That is the equivalent of about three floors in our office building.

Recently we established a management-by-objective system and have tied it to our evaluation of managers' performance. We will continue to make management improvements and to manage the agency's docket in a manner which insures the appropriate public protection and provide for a safe, sound transportation system.

The administration's legislation to further deregulate interstate motor freight, household goods, freight forwarder, bus and inland waterway carriers and to sunset the Interstate Commerce Commission by October 1, 1987, has been introduced in both houses of Congress. The legislation proposes to transfer the remaining rail regulatory functions and associated staff to the Departments of Transportation and Justice. The handling of consumer complaints regarding household goods would be administered by the Federal Trade Commission.

The resource numbers underlying this legislative proposal are as follows, and I will submit that for the record. The total resources to be transferred are $18 million and 274 staff-years. These are very close to the amounts currently devoted to rail matters at the Commission today. In addition, $13.895 million is requested to cover severance costs of ICC employees who would not be transferred to other agencies.

The Commission is on record as supporting previously introduced legislation to reduce or eliminate the regulation of nonrail surface transportation, particularly the regulation of motor carriers of property. We have also supported various proposals for reducing regulation of water carriers and brokers. Because I believe these new legislative proposals will produce a more efficient transportation system and eliminate needless regulation, I support the administration's initiative.

The administration is also requesting an appropriation of $47.979 million and 748 staff-years under current legislation to fund the ICC in the event sunset legislation is not enacted. This request is 58 staff-years less than were expended in fiscal year 1986 and reflects the Commission's continuing efforts to make the most efficient use of resources.

For instance, some decreases in workload have continued to occur with respect to our motor carrier regulatory functions. The staff time devoted to motor carrier functions is projected to decline an additional 10 percent between 1986 and 1988.

The Commission continues to implement provisions of the Staggers Rail Act and render key rail policy decisions; however, projected workload reductions will permit staff resources devoted to rail activity to be reduced 4 percent between 1986 and 1988.

During periods of retrenchment, administrative support activities do not always decline in direct proportion to the reduction in employment levels for the agency as a whole. The wide range of administrative functions must continue to be performed and new ones, such as implementing the new federal employee retirement system, are added all the time.

Staff resources devoted to the management and administrative portion of our budget request remains relatively unchanged between 1986 and 1988.

Whether the Commission continues to operate as an independent entity carrying out its present responsibilities or whether the regulatory responsibilities are transferred to other agencies are matters for you, the Congress, to decide. But, in the absence of further regulatory reform legislation, the resources reflected in the Commission's proposed budget under current legislation will be required to carry out the Commission's regulatory responsibilities.

I would be happy to answer any questions that you may have.

PREPARED STATEMENTS

I also have a statement which I would like to submit for the record with regard to directed rail service.

Senator LAUTENBERG. Without any objection, the full statement will be included in the record. We also have prepared statements from Vice Chairman Lamboley and Commissioner Simmons.

[The statements follow:]

STATEMENT OF HEATHER J. GRADISON

Thank you for inviting me here today. Before we discuss the Interstate Commerce Commission's FY 1988 appropriation request, I would like to highlight some of the Commission's recent actions and plans for the immediate future.

The Commission has dealt with a number of very difficult policy issues in the past year, particularly in the rail area: revenue adequacy, product and geographic competition, competitive access, rail cost adjustment factor and cost recovery procedures, boxcar joint rates, tank car mileage allowances, shortline acquisitions, and securities exemption. In addition, a number of significant cases were decided: the Powder River construction case, the San Antonio coal rate case, the Santa Fe/Southern Pacific merger case, the Omaha Public Power rate case, and the nuclear fuel rate case. We have focused our resources on coal rate cases and we are now preparing to move on the non-coal rate docket. Additional public comments have been requested on a proposed rule addressing non-coal rates. We are committed to clearing out the existing rail rate cases.

In the motor carrier area, the Commission dealt with two key issues: the liability insurance crisis and the National Industrial Transportation League petition to institute a rulemaking on negotiated rates. The Commission issued interim rules to allow motor carriers to file for self insurance. Currently, 48 applications have been filed. Of that total, 17 applications were granted, 8 were denied, 5 were withdrawn, and 18 are pending. Final rules on self insurance were served on February 5, 1987. In the petition on negotiated rates, the Commission decided that upon court referral the Commission would recommend whether equitable relief should be granted to a shipper when an agreed upon rate is not filed by a carrier. We are continuing to expeditiously process cases filed under these proceedings and others on our motor carrier docket.

In addition, administrative efforts have concentrated on eliminating forms and significantly reducing the hours spent completing them. We reduced office space by over 40,000 square feet and streamlined our field and regional office structure. Recently, we established a management by objectives system and have tied that to our evaluations of managers' performance. We will continue to make management improvements and manage the agency's docket in a manner which ensures that the appropriate public protections are in place and a safe, sound transportation system is provided.

The Administration's legislation to further deregulate interstate motor freight, household goods, freight forwarder, bus, and inland waterway carriers and to sunset the Interstate Commerce Commission by October 1, 1987, has been introduced in both houses of Congress. The legislation proposes to transfer the remaining rail regulatory functions and associated staff to the Departments of Transportation and Justice. The handling of consumer complaints regarding household goods movers would be administered by the Federal Trade Commission.

The resource numbers underlying this legislative proposal are as follows:

$16.763 million and 249 staff-years transfer to DOT
$ .843 million and 16 staff-years transfer to DOJ
$ .4 million and 9 staff-years transfer to FTC

The total resources to be transferred are $18 million and 274 staff-years. (These are very close to the amounts currently devoted to rail matters at the Commission). In addition, $13.895

million is requested to cover severance costs of ICC employees who would not be transferred to other agencies.

The Commission is on record as supporting previously introduced legislation to reduce or eliminate the regulation of non-rail surface transportation, particularly the regulation of motor carriers of property. We have also supported various proposals for reducing regulation of water carriers and brokers. Because I believe these new legislative proposals will produce a more efficient transportation system and eliminate needless regulation, I support the Administration's initiatives.

The Administration is also requesting an appropriation of $47.979 million and 748 staff-years under current legislation to fund the ICC in the event sunset legislation is not enacted. This request is 58 staff-years less than were expended in FY 1986 and reflects the Commission's continuing efforts to make the most efficient use of resources. For instance, some decreases in workload have continued to occur with respect to our motor carrier regulatory functions, and staff time devoted to motor carrier functions is projected to decline 10% between FY 1986 and FY 1988.

The Commission continues to implement provisions of the Staggers Rail Act and render key rail policy decisions. However, projected workload reductions will permit staff resources devoted to rail activities to be reduced 4% between FY 1986 and FY 1988.

During periods of retrenchment, administrative support activities do not always decline in direct proportion to the reduction in employment levels for the agency as a whole. The wide range of administrative functions must continue to be performed and new ones, such as implementing the new Federal employee retirement system, are added all the time. Thus, the staff resources devoted to the management and administrative portion of our budget request remains relatively unchanged between FY 1986 and 1988.

Whether the Commission continues to operate as an independent entity carrying out its present responsibilities or whether the regulatory responsibilities are transferred to other agencies are matters for the Congress to decide. But, in the absence of further regulatory reform legislation, the resource levels reflected in the Commission's proposed budget under current legislation will be required to carry out the Commission's regulatory responsibilities.

Directed Rail Service

Thank you for inviting me here today to discuss the Interstate Commerce Commission's FY 1988 budget request for directed rail service payments.

The most recent directed rail service payments were made to the Kansas City Terminal Railway Co. for directed service performed over the lines of the Chicago, Rock Island, and Pacific Railway Co. between October 15, 1979, and March 23, 1980. The account has been inactive for some time.

At the end of FY 1986, the Commission had an unobligated balance of approximately $53,000 in directed service funds remaining from the FY 1982 supplemental appropriation of $8 million. Under the Continuing Resolution for FY 1987, P.L. 99-500 and P.L. 99-591, the balance of $53,000 was transferred to the Commission's Salaries and Expenses account.

There are currently no funds for directed service, and no new directed service is anticipated in FY 1987 or FY 1988. As a result, we have not requested an appropriation of additional funds for this account under current legislation. Under the Administration's sunset proposal, responsibility for directed rail service would transfer to the Department of Transportation.

I would be happy to answer any questions you may have.

STATEMENT OF VICE CHAIRMAN LAMBOLEY

It is my belief that the budget proposed for FY 1988 may not be adequate in certain respects.

I adhere to my statement submitted with the budget estimate transmitted to Congress on January 15, 1987, a copy of which is attached.

Likewise, I cannot join in those matters not presented or voted as part of the ICC's budget submission.

VICE CHAIRMAN LAMBOLEY'S PREVIOUS STATEMENT

Mindful of appropriate fiscal restraint, it is nevertheless my belief that the budget proposed for FY 1988 may not be adequate in certain respects.

Over the past several years, this agency has significantly and responsibly reduced its personnel and budgetary resources.[1] I am concerned that certain reductions may compromise our ability to carry our responsibilities in some subject areas for FY 1988.

Present experiences are a sufficient predicate upon which to make reasonable forecast assumptions that in the next 12-18 months caseload and responsibilities will not significantly decrease; indeed they could increase.

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[1] It should also be noted that for a variety of reasoons during FY 1986 and 1987 this agency sustained what could be fairly characterized as an accelerated attrition rate. Although occasioning an "attrition based" increase in productivity in the short run, this, coupled with hiring freeze and budget cuts, is not likely to result in real productivity gains or savings over the longer term. Personnel retention and recruitment pose problems.

For example, notwithstanding prospects for economic deregulation, insurance and safety fitness will remain important motor carrier issues requiring application and enforcement attention. Self-insurance for liability and cargo coverage present new demands. Our recent shipper-supported decision in Ex Parte No. MC-177 concerning unreasonable practices as assignment of collection of freight charges provides a new remedial opportunity in this forum and requires adequate development of factual record for decisionmaking.[2] Transportation activity and services of third parties such as brokers suggest potential new concerns.

Rail activities will continue to require significant attention and resources. Rate cases require prompt review and decision. Investigation of revenue adequacy and cost of capital in Ex Parte No. 393 (Sub-No. 1), Standards for Railroad Revenue Adequacy, is, and will be, an important undertaking. It is acknowledged that abandonment cases have become more complex and may require record development through oral hearings. Emphasis on continued rail service has resulted in more OFA proceedings[3] and the establishment of shortline and regional railroads. Cases arising out of the growing numbers of these new carriers already suggest additional acquisition, consolidation and control related issues.

Acquisition and merger applications of CSX (Sea-land) and UP-MKT, involve resources of various bureaus and offices for evaluation. Also pending is the reopening request in Finance Docket No. 30400, Santa Fe Southern Pacific Corporation - Control - Southern Pacific Transportation Company.

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[2] One bankruptcy court has already transferred some 50 cases from its docket to this agency for consideration under Ex Parte No. MC-177, NITL - Petition to Institute Rulemaking on Negotiated Motor Common Carrier Rates.

[3] Offers of Financial Assistance. (49 U.S.C. Sec. 10905, See also Sec. 10906 public use).

Finally, our responsibility for purposes of emergency preparedness, civilian and military, and our NDER component require renewed attention and commitment.[4]

In sum, I am concerned that we may be developing an attrition-based efficiency that is reactionary rather than planned. In my view, the substance and significance of matters presently, and reasonably anticipated to be, pending before the agency, coupled with our responsibility to provide studies and information to Congress, require adequate resources.

I believe that the FY 1988 personnel and budgetary resources allocated for the Office of Proceedings, the Bureau of Accounts, and the Office of Compliance and Consumer Assistance may be less than adequate.

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[4] National Defense Executive Reserve, See Executive Order 11490, Part 21.

STATEMENT OF COMMISSIONER SIMMONS

I continue to believe that the Commission's recommended FY 1988 Budget, as modified by the OMB review process, provides inadequate resources for the Commission to perform its statutory duties. A copy of my previous separate statement on these matters follows. Although a majority has now voted in No. 38904 to virtually eliminate motor carrier reporting requirements, I still feel that the proposed staffing for the Bureau of Accounts is inadequate to meet its many responsibilities.

PREVIOUS STATEMENT

When the Commission's FY 1988 budget request was sent to the Office of Management and Budget, I expressed my concern that the resource levels included in the request might not be sufficient to fulfill our statutory responsibilities. Specifically, I noted that the staffing levels recommended for the Bureau of Accounts and the Office of Compliance and Consumer Assistance (OCCA) could prove inadequate to meet the expected number of motor carrier self-insurance filings. The Commission's activities in response to the insurance crisis facing motor carriers have been of significant assistance to the industry, and any responsible budget request should allow for the continuation of these activities. Additionally, I noted that OCCA staffing levels would not permit any increase in our minimal participation in the National Defense Executive Reserve program. Resources for the Office of Proceedings did not reflect the number of complex abandonments and rail or intermodal merger proposals expected to be received in FY 1988.

Given my concerns over the Commission's initial budget recommendations, I was extremely disappointed by the results of the OMB review process. OMB has recommended a further cut of 14 staff years from the 762 proposed by the Commission. I cannot support this action, which could frustrate the ICC's ability to carry out our responsibilities under existing statutes.

Two of OMB's cuts would apparently come from the Chairman's satellite offices. The Commission requested an additional staff year for the Office of Legislative and Public Affairs "to enable it to be more responsive to the Congress, especially in dealing with the various legislative proposals to restructure the Commission's regulatory role." On this basis, I feel that the Commission's request for a staffing level of 12 for this office is fully justified. The second cut would come from the Office of Human Relations, reducing its staffing from 5 to 4. I find this reduction in the Commission's ability to respond to human needs to be simply unacceptable. I trust the Congress will conclude likewise.

OMB has also targeted the Secretary's Office for a reduction from the ICC recommended 88 staff years to 85. After extensive discussion, the Commission specifically voted at its budget conference to request these three additional employees in order to remedy a serious problem in the processing of motor carrier insurance filings. Because insurance notices were not being promptly posted by the Secretary's Office, the Commission's ability to monitor the financial responsibility of motor carriers operating on the nation's highways was significantly compromised. Approval of these three positions would prevent a recurrence of this shortcoming.

The reduction by OMB in the ICC recommended staffing level for the Bureau of Accounts, from 70 to 65, is apparently based on the assumption that the pending proposal in No. 38904 will be adopted. This proposal would virtually eliminate financial reporting requirements for Class I and II motor carriers. Voting in this proceeding has been suspended for more than a year, and in my view it is unlikely to be adopted as proposed. A reduction in staffing for the Bureau of Accounts, premised on an action which may not take place, would be very disruptive. Given the importance of this office for effective management of our regulatory responsibilities, care should be taken that staffing remains at a reasonable level.

The last cuts recommended by OMB are in the Office of Hearings and the Bureau of Traffic. After considerable discussion, the Commission specifically voted at its budget conference to propose six staff years for the Office of Hearings. This proposal was based on our best estimate of the need for oral hearings in FY 1988. These hearings can be extremely valuable in developing a record in complex cases and in resolving disputed factual issues. A reduction in staffing from 6 to 5 would seriously affect the usefulness of this office.

Finally, I am aware of no basis for lowering the ICC proposed staffing for the Bureau of Traffic from 73 to 70.

In recent years, the Commission has experienced staffing reductions of a level almost unheard of in the Federal government. We are attempting to meet our statutory responsibilities with greatly reduced resources. I respectfully request that the Congress provide those resources necessary to fulfill our responsibilities under the existing statutes in FY 1988.

CONCERN ABOUT TERMINATION OF AGENCY

Senator LAUTENBERG. Thank you very much for that testimony, Ms. Gradison. I am concerned obviously about the termination of the agency because I assume that in its charter and in its mission there was some significant value to the functions that it was performing with a fairly good sized staff and a fairly significant budget.

I believe that you would support the notion that it was valuable, that those people had things to do, and that there were rules and regulations to enforce. So we are going to talk about that for just a minute.

The Interstate Commerce Commission Sunset Act of 1987 is contained in the administration's Trade Employment and Productivity Act of 1987. What is the status of that legislation at this point?

Ms. GRADISON. It is my understanding that the sunset portion of that legislation has been taken out by the Ways and Means Committee, and it is not presently under consideration in the House. With regard to its status in the Senate, it continues to sit.

Senator LAUTENBERG. Given the reception that the proposed sunsetting has received, what do you think the chances are for this proposal to be enacted?

Ms. GRADISON. I should be asking you, Senator.

Senator LAUTENBERG. Well, I want to make sure so that we both can look back in history and say the chairman of the committee and the chairperson of the Commission both had the same idea, or if they differed we want to know why and when it took place.

Ms. GRADISON. Let me say that I am supportive of the sunset of our motor carrier functions. It seems to make sense to transfer our insurance responsibilities to the DOT because DOT is responsible for motor carrier safety. Put them under the same roof.

Any other economic regulation of motor carriers simply is not necessary. It is redundant, it is expensive, and it does not need to be continued.

Now, the rail area is another story altogether. The rail functions must be continued, but whether they are continued by the Interstate Commerce Commission, by the Department of Justice or by the DOT is less significant than having them carried out fully and responsibly. As long as those duties are housed in the Interstate Commerce Commission, it is my responsibility to see that they are carried out fully and responsibly, and I am doing just that.

Senator LAUTENBERG. So I think I hear you saying yes, but. Do you believe that the agency responsible for the safety oversight of an industry ought also to be the economic regulator of that industry?

Ms. GRADISON. Well, the CAB was transferred to the Department of Transportation, and they have an isolated unit within the DOT. I am not in a position to make a judgment on how effectively that is functioning.

Senator LAUTENBERG. I am, and I will. Maybe if you saw the day before yesterday's paper, you would have seen my criticism of that. So I would have to say that I am not encouraged by that, even though I heard what you said, that you are not in a position to respond to that.

It does not sound like a good idea, I bet I could get you to say, but I do not want to push that too far since we come from New Jersey.

Ms. GRADISON. Thank you very much.

Senator LAUTENBERG. The proposed legislation eliminates the remaining trucking regulations. What has been the response of affected groups like the American Trucking Association [ATA] to this proposal?

Ms. GRADISON. They have not been supportive of the sunset of the agency.

RESPONSE OF COMMISSIONERS TO SUNSET PROPOSAL

Senator LAUTENBERG. OK. What is the feeling of your fellow commissioners to the sunset proposal?

Ms. GRADISON. We have not been able to pin them down. Quite honestly, we have had a variety of responses from the membership, and I believe that I am the only one who has taken a public position on this issue.

Senator LAUTENBERG. Which is to support it?

Ms. GRADISON. To go ahead and support the administration's proposal.

Senator LAUTENBERG. So taking the public position means that, as your explanation suggests, the others did not disagree with the sunsetting?

Ms. GRADISON. In my capacity as chairman, I can represent what the agency does as a body, but I cannot represent the thoughts of the commissioners as individuals.

Senator LAUTENBERG. Right, but you must have heard——

Ms. GRADISON. My predecessor attempted to do that on occasion, and I will not do it.

Senator LAUTENBERG. Right, but you have heard some opinions. It is not a hear no evil, see no evil kind of commission, is it? I mean, there are——

Ms. GRADISON. I would be happy to request that they submit——

Senator LAUTENBERG. No; I do not have them here in front of me, and so what you are saying is that you heard nothing from any of them that suggests an opinion——

Ms. GRADISON. That would be supportive of the proposal.

Senator LAUTENBERG [continuing]. That would be supportive of the proposal. OK. So the reverse of that is that we can conclude they do not.

Are there provisions of the sunset act that you believe should or could be enacted and not others, and with that the Commission would exist at a reduced level?

MOTOR CARRIER ECONOMIC REGULATION

Ms. GRADISON. Yes, sir; with regard to the motor carrier economic regulation, it is time to do away with the paper tariff filing requirements. In 1935 when our jurisdiction was expanded to include the motor carrier industry, the technology was not available for communication transfer that we have today, and it is time for the surface transportation industry to be given the opportunity to take advantage of the technological change that other industries in this country have been allowed to use.

Certainly information transfer, pricing, availability of equipment, availability of rates, and competitiveness of rates can be done in the private sector, and there is not a need for the government to require that these documents be filed in paper at the Interstate Commerce Commission.

So certainly that aspect of the administration's sunset proposal could and should be implemented.

Senator LAUTENBERG. Last year the sunset proposal was drawn up without the agency's input. Did the Commission have a part in drawing up this year's sunset legislation?

Ms. GRADISON. No, sir.

Senator LAUTENBERG. I just wanted to ask. My colleague is here and the ranking member of the Committee. Senator, do you have any questions?

STATEMENT OF SENATOR D'AMATO

Senator D'AMATO. Mr. Chairman, I have a statement I would like to submit for the record as if read in its entirety.

It is very nice to have the graciousness of our Chairwoman here today, and let me welcome her. Heather does a wonderful job.

Let me also compliment her on the adroit manner in which she responded, Mr. Chairman, to your very probing questions. Please give the Congressman my best, and it was nice to see you here.

Thank you, Mr. Chairman. I have no questions of this witness. Later on I think I have a question for our next witness. Thank you for your graciousness.

[The statement follows:]

STATEMENT OF SENATOR D'AMATO

Mr. Chairman, it is a pleasure to welcome our witnesses today. We will hear from both Chairwoman Gradison of the ICC, and Cynthia Douglass, Administrator of the Research and Special Program Administration. The ICC budget assumes the sunset of that independent agency by October 1, 1987. Legislation has been proposed to transfer the remaining statutory functions to the Departments of Transportation and Justice, with consumer complaints on household goods movers to be administered by the Federal Trade Commission.

The Research and Special Programs Administration has responsibility for the pipeline grants to states which help support the inspection of the gas and hazardous liquids which move underground through our communities. This is a very important program, especially in light of the tragic explosion yesterday in the Bronx. In addition, the staff of RSPA work with the other modes of the DOT on the safe movement of hazardous materials, by air, rail, and highway. Those of us who represent the densely populated Northeast are particularly mindful of the importance of this function, and are concerned, frankly, that not enough is done to guard against a catastrophic spill.

I thank the chairman, and the witnesses before the subcommittee.

REDUCTION OF COMMISSION REQUEST

Senator LAUTENBERG. Thank you, Senator D'Amato.

The original Commission request for fiscal year 1988 was reduced by OMB. Staff-years were reduced, the Secretary's Office by three, Hearings by one, and the Commissioners' support offices, including Government Affairs and Human Relations.

Assuming that there is life after this, can the Commission live with these cuts? Can you function well?

Ms. GRADISON. Yes, sir; in the Secretary's Office we currently have 85 people, and that is what we are scheduled to have for the coming fiscal year as well.

When the Commission wrote its budget last August, we anticipated, or some members of the Commission, anticipated an increased workload in insurance filing. That has not materialized. We anticipate one-half the number of abandonment applications this year that we had last year. Last year, for 1986, we had 496. A 2-month sample for 1987 would indicate that there will be exactly half.

Now, they will be more complex. We anticipate that, so rather than dealing with the volume we will be dealing with more complex cases.

With regard to the Office of Hearings, five staff members appear to be adequate. That is how many people they have today. They do not need an increase in resources.

In the Office of Government Affairs and Human Relations—that is EEO, we have changed the name—we have had no new complaint cases, where in the past we were dealing with a substantial volume of them. I would like to anticipate having none, but that is not human nature.

Government and Public Affairs, we have beefed up that office. You will see members of the Interstate Commerce Commission here on Capitol Hill in both the House and Senate visiting with staff members, trying our best to keep you apprised of what we are doing, how we can be responsive to you and your constituents' concerns.

We are an independent agency, and so we are not up here to lobby. We are here to give you information about the agency and how we can best serve you.

Senator LAUTENBERG. Even though the caseload has been reduced, you suggest that the petitions you receive could be more complicated, more complex. Does that suggest to you that there would be an immediate reduction in the work requirement even if the cases are more complex though less in number?

Ms. GRADISON. We are holding steady. No, we will not have a reduction in staff demand. What we have done is we have tried to use the resources we have better than in the past, and the way we have done that is by giving our managers clear direction for what is expected of them and deadlines. By putting in place an MBO, management-by-objective system, we now have an element of accountability similar to what one finds in the private sector. So we are doing more with less with tighter strings.

Senator LAUTENBERG. I think implicit in what you are saying is that obviously there was a surplus of resources, whether in personnel or funding, or the management improvement reduced the requirement.

Is it possible that maybe part of the workload was reduced as well, or was this just brilliant management?

Senator D'AMATO. Brilliant management. Take it.

Ms. GRADISON. I will take it.

Senator LAUTENBERG. We will let it go unanswered.

Ms. GRADISON. I accept that honor. We have taken a look at the resources that are available. Some of our workloads in some areas are down, and in other areas they are up. We are doing a good job.

I think if you were to survey the audience there would be those with their complaints, because it does take a long time to deal with complex cases.

Senator LAUTENBERG. We certainly can endorse management improvements and the technique and process by which organizations are run. We hear other criticisms, particularly in the motor truck area. It suggests that there is a lot of information being massaged without sufficient value coming forth.

PRIMARY FUNCTIONS IN MOTOR CARRIER AREA

In the motor carrier area, what are the ambitions, the primary function at this point? Can you give me some quantification?

Ms. GRADISON. We provide for operating certificates. We also provide for insurance oversight, and we provide for tariff filings of rates. We also bestow upon motor carrier rate bureaus antitrust immunity for collective actions.

Senator LAUTENBERG. Are the shippers in consumer complaints principally in the rail area that you are dealing with?

Ms. GRADISON. Yes, sir.

Senator LAUTENBERG. How many certificates are issued each year?

Ms. GRADISON. About 11,000.

Senator LAUTENBERG. Is that a fairly constant number over recent years?

Ms. GRADISON. The number has held fairly constant. It seems to be diminishing about 5 percent a year. We have any number of carriers who are coming to the Commission to expand their operating authority, and that seems to be a large part of the certificate process today.

Senator LAUTENBERG. Let me ask you a couple of questions about some concerns I have for our favorite state, and I include you in that support team.

A number of large chemical companies, some of which have New Jersey operations, support section 9 of the Consumer Rail Equity Act. That section states the Commission's affirmative obligation to promote reciprocal switching in terminal facilities and requires proportionate rates to discourage anticompetitive joint rate action.

MIDTEC CASE

The recent *Midtec* decision seems to say the Commission disclaims any affirmative obligation to promote competition. Do you think that is a fair assessment?

Ms. GRADISON. No, sir; that is absolutely wrong.

Senator LAUTENBERG. Why?

Ms. GRADISON. The Commission has Ex Parte No. 445 (Sub-No. 1) guidelines, which are guidelines agreed upon by the shippers and the carriers. They are consistent with the law, and the Commission uses those guidelines to award trackage rights in the event that we find a competitive abuse.

In the *Midtec* case, we did not find competitive abuse by the existing carrier. The Commission will grant trackage rights in cases where we do find competitive abuse. The Commission has granted trackage rights in a limited number of instances. We have a very limited number of cases pending before us dealing with this issue.

I have about seven paragraphs that I would like to submit for the record dealing with the question, but most specifically I would like to say that if there had been any way under the Ex Parte No. 445 (Sub-No. 1) guidelines that I, as one Commissioner, could have voted to grant that access, I would have granted it because my life would be much easier if we had.

Under the guidelines, however, I could not in good conscience vote to distort the rules that the industry had agreed upon among themselves and the Commission had blessed.

[The information follows:]

SUPPLEMENTAL STATEMENT OF CHAIRMAN GRADISON ON THE MIDTEC CASE

The Staggers Act amended existing law to give the Commission new authority to order mandatory switching. At the time of Staggers enactment, it was well established that the Commission could order the joint usage of terminal facilities and related, but modest, trackage outside of the terminal area. This power had been given the Commission to insure that terminals were not permitted to become anticompetitive strongholds. What was less clear was whether the Commission could order carriers to enter into agreements to switch one anothers' cars for the purpose of creating competitive service. The Carter Administration in 1979 proposed to require, without exception, that switching services would be provided to all carriers within a standard metropolitan district. Both the Senate and the House rejected this approach. Congress indicated instead that the issue should be left to the Commission's discretion, and geared the standard for decision making to the practicality of the service and the need for competition. There was general agreement among the lawmakers that reciprocal switching should be encouraged, with the Senate indicating that switching "provides an avenue of relief for shippers served by only one railroad where service is inadequate."

Staggers enactment did not lead to an outpouring of applications for new switching service--there have been approximately a dozen. Up to the promulgation of rules in Ex Parte No. 445 (Sub-No. 1), the Commission approached these cases ad hoc, and its record, while not pleasing to its critics, is largely consistent with the precedent and analysis that had been developed for joint terminal usage, and it has been sustained in the courts. Switching was ordered in several cases, but more often denied--there being no showing of competitive need. One such denial, the Midtec case, remains hotly disputed.

With respect to Midtec, a few background thoughts. The Staggers Act created a climate and opportunity for the adjustment of many joint rates. Much of the joint rate network in place at the time of Staggers reflected two equally troublesome problems--a regulatory policy of requiring rate equalization without regard to route efficiency or competitive need, and a system of divisions that reflected antiquity more than anything else. Attempts to "rationalize" this structure gave rise to a series of aggravated disputes, the most notable arising out of broad joint rate cancellations on Conrail's system. The Commission's initial approval of these early efforts led shippers to approach the rails directly, seeking some compromise, a process that culminated in the Ex Parte No. 445 (Sub-No. 1) rules. While focused on joint rates, the new "Intramodal" rules were drawn up to include switching cancellations and applications, hence the relation of the rules to Midtec.

The Commission has been reflexively criticized for its recent Midtec decision--it has even been said that Midtec demonstrates that the Intramodal agreements are empty of promise for shippers, and that new legislation is needed. Before you reach those conclusions, I would recommend a close reading of the Midtec opinion, to inform yourselves directly about what took place, because the rhetoric has not been following the reality.

The Ex Parte No. 445 (Sub-No. 1) agreements reflect a compromise between shippers and carriers, the compromise centering around the proposition that intervention by the Commission is dependent upon the antecedent demonstration of a competitive problem. Lest there be any doubt about this, let me quote the words of the agreement...

> ...a through rate shall be prescribed...or a switching arrangement shall be established...if the Commission determines that the prescription or establishment is necessary to remedy or prevent an act contrary to the competition policies of (the National Transportation Policy) or is otherwise anticompetitive...

With regards to switching controversies, this compromise is particularly appropriate because of its close consistency with the Staggers Act handling of the switching issue--the rejection of mandatory switching in favor of discretion keyed to competitive requirements.

When the Commission requested a remand of its original, pre-Intramodal decision in the Midtec case for consideration under the new rules, we did so with the new competition standard precisely in mind. Could competitive abuse be demonstrated under the new rules? In the second Midtec decision, we overruled our earlier holding that market dominance would have to be shown as a preliminary matter; we went directly to the issue of harm. We looked for excessive or non-competitive rates, we looked for deficient service, we looked for actions that would have foreclosed a second railroad from meaningful participation in the market. None were found. Midtec has been getting competitive rates, reasonable service, and the Soo Line, the second carrier, has had numerous opportunities to participate profitably in serving this shipper. The shipper's own experience showed that its business was expanding and its reliance on rail service increasing, even for commodities where intermodal options existed. In fact, Midtec never really offered much by way of evidence to argue competitive abuse in any cognizable form. Its claim was clear, it preferred to have the service of a second carrier, believing that its condition would improve.

An automatic preference for a second carrier--that was the Administration approach in 1979, rejected by Congress in 1980. That was the goal of some in the shipper community during the Ex Parte No. 445 (Sub-No. 1) negotiations--rejected by the NIT League and other shippers who supported the new rules. It has now been again rejected by a majority of the Commission. Had Midtec been awarded relief, it is difficult to imagine the denial of direct service by a second carrier to any shipper, short of arbitrary discriminations. It would certainly have been anomalous to commit the country to a mandatory access policy in an isolated adjudication, when the policy had been twice rejected in more broadly attended debates.

STAGGERS ACT

Senator LAUTENBERG. Do you think under the Staggers Act the Commission has a responsibility to promote competition?

Ms. GRADISON. I am sorry, I did not hear you.

Senator LAUTENBERG. Under the Staggers Act, do you believe that the Commission has the responsibility to promote competition among the rail lines?

Ms. GRADISON. Yes, sir.

Senator LAUTENBERG. Another concern to rail shippers in my state is the possibility of abandonment, which we discussed briefly before.

Now that Conrail is covered under the same abandonment authority as other railroads, do you have any indications whether Conrail intends to step up its abandonment proceedings? Do you have any knowledge about that?

Ms. GRADISON. We have no indication as to what they will do. They filed for a series of lines before the NERSA law expired in December 1985. They did file for a series of lines that the NERSA rules could apply to. We have had no indication from them of their intention to abandon those lines since that time.

Senator LAUTENBERG. Their life obviously has changed in recent weeks. I would be very interested in whether or not they do indicate any aggressive attitudes toward abandonment. It would have a serious effect in our area, and we will be watching for it.

Last year before another Senate committee, you testified that since the Staggers Act, 1,300 abandonment applications had been filed, of which only 23 were denied.

Do you have an update on those numbers in terms of applications?

Ms. GRADISON. We will be happy to provide it for the record.

[The information follows:]

ABANDONMENTS SINCE THE STAGGERS ACT

Fiscal Year	Applications							
	Filed		Granted		Denied		Dismissed	
	No.	Mi.	No.	Mi.	No.	Mi.	No.	Mi.
1981	161	3,219	81	1,342	1	12	11	25
1982	382	4,821	381	5,151	3	52	34	696
1983	178	3,702	123	2,454	2	28	7	91
1984	472	3,878	419	3,083	7	548	5	69
1985	138	2,877	148	2,343	3	103	30	657
1986	141	1,891	117	1,417	4	148	11	275
1987**	35	520	51	495	2*	32	7	120
Subtotal	1,507	20,908	1,320	16,285	22	923	105	1,933
			Notice of Exemption 1/ 2/					
1985	81	412	76	408	0	0	2	36
1986	30	221	43	346	0	0	6	53
1987**	12	85	8	51	0	0	1	5
Subtotal	123	718	127	805	0	0	9	94
			Petitions for Exemption 1/					
1985	12	216	43	299	0	0	4	10
1986	93	861	56	324	0	0	4	6
1987**	56	546	65	748	0	0	3	22
Subtotal	161	1,623	164	1,371	0	0	11	38
TOTAL	1,791	23,249	1,611	18,461	22	923	125	2,065

No. = number filed
Mi. = mileage

1/ There were some notices and petitions for exemption filed pre-1985. They total 100-150 cases. Computer records do not include them.

2/ Notices of exemption are the "out of service" line class exemptions.

* Of the two denial decisions, one is not administratively final.

** Complete through March 31, 1987.

EFFECTS OF ABANDONMENTS

Senator LAUTENBERG. It does not come quickly in terms of the information that you have.

Ms. GRADISON. Basically, abandonments are not applied for unless they meet the letter of the law for a grant. The companies do not go through the exercise of making the application unless there is a high likelihood that the line qualifies under the statute.

We have the discretion to grant or deny, and we have denied in a limited number of instances, but they do not make the application unless they are pretty close to qualifying.

The other thing that we have done with regard to abandonment is we have provided for short line acquisition. That has changed the face of the nation's transportation system. Now that we have class III carriers operating lines that would have been abandoned in the past, we have seen a whole new industry emerge, a hub and spoke system of small communities receiving better service. Where it was not cost effective for the class I carriers to continue their operations, we now see operations continued to those communities as a result of these transactions.

Senator LAUTENBERG. ICC's Office of Public Assistance was established to respond to community shippers facing possible abandonment. There was an increase in the activity between fiscal year 1986 and fiscal year 1987.

This acquisition of short lines that you just talked about may have played a role here, but what mechanisms will ICC use to be responsive to the increasing number of requests for guidance in utilizing rail abandonment protests received?

Ms. GRADISON. We have publications that we share with the communities. Our office is available for telephone contact, but we also do visit the communities if there is a need to try to give them guidance so that they can either continue service, have a short line take over the service, or find alternative transportation in the event the line is abandoned.

Senator LAUTENBERG. Well, then does the budget request for fiscal year 1988 reflect regarding this responsibility, as you see it?

Ms. GRADISON. This year and next year both the staffing is scheduled for 15 full-time employees. I think that the office is significant enough that when I became Chairman I took one of my key staff advisers and placed him in charge of that office. His name is Sam Eastman, and he has years of experience in the surface transportation industry. He also is a Harvard-educated lawyer——

Senator LAUTENBERG. We will forgive him for that.

Ms. GRADISON [continuing]. Who has a sense of diplomacy.

Senator LAUTENBERG. Neither the ranking member nor I went to Harvard, so you did not win any friends with that. I went to Columbia in New York.

Senator, you went to school in New York State; correct?

Senator D'AMATO. Syracuse.

Ms. GRADISON. May I retract the remark? [Laughter.]

Send him back to school?

Senator LAUTENBERG. You are maintaining the same staff, that is, you are requesting a maintenance at the same staffing level yet the number of requests for abandonment looks like it is accelerating. Is that a fair statement?

Ms. GRADISON. No, no; the number of requests for abandonment appears to be half.

Senator LAUTENBERG. Right, I am sorry. I meant, they are more complex.

This leaves you with a feeling that you can handle the more complex though fewer requests, the more complex obviously would take more time. Are you still able to handle the number of requests in the kind of fashion that they obviously require?

Ms. GRADISON. Yes, sir; in the event that we find an increase in the abandonments, we will shift resources from within the agency to deal with the increase, if one occurs.

Senator LAUTENBERG. If there was a potential abandonment case in New Jersey, I would like your assurance that a field hearing would be held on this matter.

Ms. GRADISON. How many are you planning on having?

Senator LAUTENBERG. We do not know.

Ms. GRADISON. I am not sure through my budget——

Senator LAUTENBERG. We are going to make certain of that before our shippers are abandoned, because we have been under some pressure over the years as there have been attempts or suggestions that some of these lines ought to be abandoned. In many cases that could mean, and has in some of our southern towns, almost an abandonment of the community because those industries upon which almost the whole community's activity is based suddenly could not have the convenience of rail shipment. It could mean the end of an era.

We want to make sure before anything like that happens that the public community and the shipper has the right to present their case publicly.

Ms. GRADISON. I can assure you that we will develop a full and thorough record. In the event that there is a level of protest and complexity to the abandonment and in the event of an abandonment where we cannot gather the information through a written record, we will have a public field hearing.

I cannot promise you that for every abandonment in your state we will have a field hearing. I am not sure that is what you would want us to do, either, because if it is one where there are no protests and there are no shippers and it is not an economically viable line, I cannot imagine that you would want us to have a field hearing. If there is, however, a particularly controversial one that is difficult and we need to be on the site in order to make a determination, you bet, we will be there.

Senator LAUTENBERG. I just want to make certain that sufficient resources are there to cull out the opinions, to solicit the views of those who could be interested. One way of assuring that some of these things will slide by is not to have sufficient resources, staffing, to get the community's view.

SUBMITTED QUESTIONS

We are going to excuse you unless my colleague has any questions, and thank you very much for your testimony. We have other questions which we will submit for the record.

Despite your fondest wishes, we may keep you on the job. Thank you very much.

[The following questions were not asked at the hearing but were submitted for response for the record:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

COMMISSION SUNSET

SENATOR LAUTENBERG: The proposed legislation eliminates the remaining trucking regulations. If these provisions were enacted how much would this reduce the Commission's resource requirements for fiscal year 1988?

ANSWER: If motor carrier regulation is eliminated, the Commission's budget estimate for FY 1988 would be reduced by $24.716 million for the motor program and by some portion of the $5.129 million estimated for the general management and administration program.

If the provisions of the sunset legislation proposed by the Administration are enacted, the Commission's FY 1988 resource requirements would be reduced by $34 million. The remaining requirement of $13.9 million would cover personnel costs associated with sunset, such as severance pay and terminal leave. Additionally, under the Administration's proposal, rail resources not eliminated would be transferred to the Department of Transportation ($16.7 million and 249 staff-years), the Department of Justice ($.8 million and 16 staff-years), and the Federal Trade Commission ($.4 million and 9 staff-years).

COMMISSION'S BUDGET REQUEST

SENATOR LAUTENBERG: The original Commission request for fiscal year 1988 was reduced by the OMB. Specifically, staff years were reduced in the Secretary's Office (-3); Hearings (-1); Accounts (-5); Traffic (-3) and Commissioner's support offices including public affairs and human relations. The Commission resources have been greatly reduced the past few years. Is there a core number of staff years necessary for the Commission relative to its regulatory responsibilities?

ANSWER: Based on current projections of workload, a majority of the Commission believes that the resource needs reflected in the FY 1988 budget request represent the "core number." Although some shifts in workload may occur, the base level of resources presented in our request should be sufficient to accommodate such variances.

REVENUE ADEQUACY

SENATOR LAUTENBERG: On March 19, 1987, the Commission found all railroads to be revenue inadequate in 1986. The ICC has never determined that a railroad has had adequate revenue. Shippers have charged that the determination doesn't give a fair picture of railroads' financial health. What is the ICC's response to that charge?

ANSWER: Although the Commission has earlier found several small railroads to be revenue adequate, none of the larger railroads have yet met the Commission's revenue adequacy benchmark. Some shippers have argued against our single indicator standard on the grounds that security analysts use several ratios to assess the financial condition of a particular company. However, our purposes and perspective are different from those of security analysts who are not only interested in long-term viability but also in potential profits for the short term. Our concerns center on the long-term viability of the railroads and their capability to provide essential rail service. Unlike security analysts, the Commission must use revenue adequacy standards which promote the continuing viability of a privately-owned rail system to meet the public's transportation needs. The Commission's rules represent an assessment of the long-term viability, and, as such, they have recently been judged favorably by the General Accounting Office and the Railroad Accounting Principles Board.

Shippers have focused attention on large cash balances and acquisitions as indications of the sound financial health of the railroad companies. However, much of this cash was generated out of tax benefits given the railroads under the Economic Recovery Tax Act of 1981. Moreover, many of these acquisitions are by the holding companies and are financed by outside loans or cash generated by non-rail operations. If viewed as single operating entities, or profit centers, the railroad companies are not earning a competitive return in the market, i.e., they are not revenue adequate. Rail earnings are low by nearly any measure: rails rank 34th out of 40 major industrial sectors. Only steel and rubber tires have ranked as consistently low over the past decade. Revenue adequacy standards which fail to allow railroads the opportunity to earn competitive returns would only serve as further incentives to disinvest in railroads.

SENATOR LAUTENBERG: What was the average rate of return in the rail industry in 1985?

ANSWER: In 1985, the average rate of return on investment for all Class I railroads was 5.8 percent.

SENATOR LAUTENBERG: What was the ICC's necessary rate of return for a railroad to be revenue adequate?

ANSWER: In 1985, a railroad had to achieve a return on investment of at least 13.6 percent to be considered revenue adequate. The 13.6 percent figure represents the industry's current cost of capital for that year, as determined by the Commission in Ex Parte No. 464, Railroad Cost of Capital - 1985, served March 16, 1987. Further, we would like to mention that even if we had used an embedded debt rate as suggested by certain shipper groups that cost of capital would be 13.2 percent. If this cost of capital standard were used, no railroad would be found to be revenue adequate.

SENATOR LAUTENBERG: Two ICC Commissioners dissented from the revenue adequacy decision. Why?

VICE CHAIRMAN LAMBOLEY: My disagreement with the recent revenue adequacy determination stems from views that our revenue adequacy standards and cost of capital methodology are flawed.

Attached is a synopsis of my views from recent decisions.

OFFICE OF VICE CHAIRMAN LAMBOLEY

EX PARTE NO. 393 (SUB-NO. 1)
STANDARDS FOR RAILROAD REVENUE ADEQUACY
EX PARTE NO. 465
RAILROAD REVENUE ADEQUACY 1985 DETERMINATION
EX PARTE NO. 466
RAILROAD COST OF CAPITAL - 1986

April 30, 1987

MEMORANDUM TO CHAIRMAN GRADISON:

Please show me with the following separate expression.

Paul H. Lamboley

cc: All Commissioners
General Counsel Burk
Director Young
Director Mackall
Clearance Unit

VICE CHAIRMAN LAMBOLEY, dissenting:

By Commission decision, the measure of revenue adequacy for railroads remains a single standard; i.e., a return on investment (ROI) equal to the cost of capital. Revenue adequacy is thus inextricably tied to cost of capital determinations.

Consequently, I view the scope of issues in Ex Parte No. 393 (Sub-No. 1), Ex Parte No. 464, Ex Parte No. 465, and Ex Parte No. 466 as likewise substantively and essentially interrelated. I disagree with the Commission's approach which compartmentalizes and bifurcates proceedings that by their very nature are integrated and present issues contemporaneously under review. At this time, I believe these proceedings should be consolidated for consideration. For that reason, I have chosen to summarize my views in a single, separate expression applicable to each proceeding.

1. BACKGROUND: EX PARTE NO. 463 - RAILROAD REVENUE ADEQUACY - 1984 DETERMINATION

In Ex Parte No. 463, we entered our revenue adequacy determinations for 1984. In doing so however, we expressly noted apparent flaws in the standard employed and a lack of confidence in resulting findings. Because of our concerns and the importance of revenue adequacy as a matter of substantive policy, as an evidentiary standard and as a rate constraint, we stated our intention to promptly re-open Ex Parte No. 393 (Sub-No. 1) to expeditiously re-examine our criteria and methodology for measuring revenue adequacy.

We also concluded that as an interim measure pending review, we would rely on the present single standard approach for purposes of administering ZORF. However, in rate reasonableness cases, we stated that we would not treat 1984 findings as determinative or conclusive of a carrier's revenue adequacy unless no other evidence relevant to the issue was presented. We expressly held that in cases where records were open, we would accept "all competent, probative evidence relevant to a carrier's revenue adequacy which the parties may submit," and that such evidence "may include various financial indicators or measurements for which the parties provide justification." And finally, noting our concern for the time lapse in annual updates, we stated that steps were being taken to ensure that more timely determinations may be .

With reference to concerns expressed in Ex Parte No. 463, the Commission in Ex Parte No. 393 (Sub-No. 1) promptly issued a new notice seeking comment on a broad range of issues, specifically including cost of capital.

It is at this juncture that my views separate from the majority of my colleagues.

2. EX PARTE NO. 393 (SUB-NO. 1), STANDARDS FOR REVENUE ADEQUACY

(a) Multiple Factors: Despite the Commission's apparent desire to utilize a single standard measure, I find no persuasive reasons why in so doing, we cannot at the very least, consider multiple factors as a supplement or complement to the single standard, and for comparative purposes, as benchmark checks for evaluating the results in light of other industry sectors.

The fact that use of multiple factors may require the exercise of discretionary judgments is not grounds for rejecting their use. There is no explicit or implied statutory requirement for use of a single standard. Indeed, if there were "bright line" objective measure for revenue adequacy, our present admittedly flawed single standard approach has not necessarily been it.

Moreover, by constrast our measurement of financial condition of motor carriers considers multiple factors in a variety of regulatory applications. For example, in rate making and self-insurance cases we do not limit our review to a single standard. Rather, we consider various factors such as ROI, ROE, operating ratios, debt/equity structure, assets/liabilities/networth and cashflow. In so doing, we have noted that ROE provides a fair measure of financial performance and profitability in investment. It likewise facilitates comparability both within and without the transportation industries.

Accordingly, I favor the admission and consideration of other multiple factors as a supplement or complement to any single standard, as well as for purposes of comparability. To the extent that revenue adequacy determination for a specific carrier is at issue in a rate reasonable case, I continue to favor the submission and consideration of such other additional financial evidence relevant to the measure of that carrier's revenue adequacy. We expressly approved this approach as an interim measure in Ex Parte No. 463, supra.

(b) Single Standard - Cost of Capital:

We expressly noticed our intention to re-examine the components of cost of capital formula as a part of our review of revenue adequacy criteria. However, we did not do so and deferred action on that issue for consideration in Ex Parte No. 464. But, as is later pointed out, we have further deferred action to Ex Parte No. 466 for additional comment. I am disappointed by our now apparent unwillingness to evaluate this issue contemporaneously with our review of standards for measuring revenue adequacy.

(c) Depreciation Accounting:

In order to avoid double expensing problems, I believe transition rules similar to those adopted by IRS should be utilized in implementing the change-over to depreciation accounting.

(d) Revalue property proposed or considered for abandonment at liquidation value

I favor the write-down property intended for abandonment in order to adjust for overstatement of value. The Commission's studies of depreciation on investment intended to review track structures every 3 years, and equipment every 6 years, is admittedly behind schedule, and thus not current. Consequently, absent depreciation adjustment, overstatement problems continue.

(e) Embedded Cost v. Current Cost:

I favor using embedded cost of debt in calculating cost of capital.

From the record evidence, I am persuaded that the present method using current rather than actual costs (1) tends to assign higher values to assets, (2) is not consistent with other general financial and accounting practices, (3) makes comparisons with other industries difficult, (4) could produce windfalls, and (5) generally results in making revenue adequacy more difficult to achieve, thus requiring higher revenue. The potential for distortion of results is thus fairly apparent.

Additionally, problems inherent in this approach flow from the fact that current costs fluctuate annually, and methods using composite estimates on industry wide basis are calculated from weighted debt/equity cost ratios from a sample of 6 major rail systems not all Class I railroads. Moreover current cost of debt estimates include estimates of yields in less quantifiable secondary markets.

(f) ROI Calculation for Rail-Related Affiliates:

I believe that Class I revenue adequacy determination should include the results of rail-related affiliates.

Options presented regarded evidence of "affiliate control" from equilavents of 20% to 50% stock ownership. Testimony reflected that control influence may flow from as little as 10% interest. Justice Department Antitrust Guidelines observe that a 5% interest may be sufficient to exercise effective control. The Commission itself has held that influence or control is a question of fact, not necessarily determined by percentage of stock ownership.

I am satisfied that at least a 20% interest may generally be considered prima facie evidence of control for inclusion purposes. Evidence of control other than stock ownership, on less than 20% should be permitted in appropriate cases.

(g) Holding Cos. Subsidiaries Supporting Rail Operations:

The record is not adequate for decision but I am inclined to favor inclusion of such results.

At this time I cannot join in publishing a cost of capital for 1985 nor in instituting a proceeding to determine cost of capital for 1986 given recent results in

The Commission's conglomerate study in 1978 suggests reasons to do so, as do our periodic reviews of transactions with affiliated companies from R-1 schedules. Moreover, the growth of intermodal initiatives will, no doubt, add new dimension to this aspect of revenue adequacy.

3. EX PARTE NO. 464, RAILROAD COST OF CAPITAL -1985, AND EX PARTE NO. 466, RAILROAD COST OF CAPITAL - 1986.

At this time I cannot join in publishing a cost of capital for 1985 nor in instituting a proceeding to determine cost of capital for 1986. Given recent results in determining revenue adequacy, the Commission is essentially now convinced that the basic methodology is flawed. In our penchant for fragmenting issues and proceedings which by their very nature are substantively and essentially interrelated, we should not overlook or disregard what may be fundamental deficiencies in methodology. However, we seemingly do so.

In Ex Parte No. 393 (Sub-No. 1), Standards for Revenue Adequacy, we specifically noticed our intention to reexamine revenue adequacy and cost of capital criteria. However, we did not examine cost of capital. Rather, we deftly put that off for consideration in a separate proceeding, Ex Parte No. 464, Railroad Cost of Capital - 1985.

In turn, in Ex Parte No. 464, we again defer and excuse re-examination of Cost of Capital because the parties commenting did not offer specific direction on what to do. I am concerned that implicit in this action is the apparent admission that absent such direction, we ourselves are literally unable to analyze the issues and recommend adjustments where appropriate.

However, in Ex Parte No. 466, Railroad Cost of Capital - 1986, the door was again opened for future examination of Cost of Capital by virtue of inviting comment on the subjet in notices anticipating cost of capital determination in subsequent years, and reiterating a request for comment on procedures to make more timely cost of capital determinations. Thus, in Ex Parte No. 466, the notice, after a brief background explanation, invites comment on cost of capital methodology and its timeliness.

Because of apparent flawed methodology, the Commission promised to undertake review of cost of capital as a part of its examination of revenue adequacy standards in Ex Parte No. 393 (Sub-No. 1). During the course of review in Ex Parte No. 464, the Bureau of Accounts had expressed concerns over certain apparent problems before the 1985 cost of capital determination. Despite its expressions of concern, the Commission seems unable or unwilling to re-examine the cost of capital methodology and timeliness for itself, with or without comment.

In my view, because the adoption of cost of capital standard as the measure of revenue adequacy is a Commission decision, and likewise because the methodology for determining cost of capital is premised on Commission action, we should not, indeed cannot, responsibly deter or avoid re-examining for ourselves that which we have determined and now acknowledge as flawed.

Rather than perpetuate these problems, I would have withheld determination in favor of more critical analysis in this and other related records. Deferral of decision would cause and focus priority attention.

In chosing to issue a decision which is acknoweledged to be flawed, I would at the very least allow other evidence relevant to revenue adequacy and cost of capital in fairness to participants ~~in~~ cases involving those subject matter issues.

COMMISSIONER SIMMONS: In Ex Parte No. 464, Railroad Cost of Capital - 1985, the Commission supplemented its decision instituting the proceeding to determine the railroad's cost of capital rate for 1985. This was done as a result of concerns expressed at the voting conference held in Ex Parte No. 393. The supplemental decision (served October 22, 1986) stated that the Discounted Cash Flow methodology may not provide an accurate measurement of the cost of equity capital. The expected growth rates used in past DCF calculations of equity capital cost have not, for the most part, been achieved in actuality. Comments were sought on the need to revise the DCF formula and on other approaches to compute the cost of equity capital.

Despite continued doubt as to the viability of the DCF method, the Commission's final decision uses it to calculate the railroad's cost of equity capital for 1985. While the parties to the proceeding arguably did not offer sufficient justification to modify the methodology or utilize a different formula, I expressed the dissenting opinion that the Commission should not employ any methodology until we can state unequivocally that it is the best and most accurate way to determine the cost of railroad equity capital. I believe the Bureau of Accounts should have been directed to initiate an independent study in this area to provide the basis for a reasoned decision regarding an appropriate calculation of the cost of equity.

SENATOR LAUTENBERG: What is the Commission doing to re-examine the methodology used for calculating the railroads' cost of common equity capital?

ANSWER: In the past, the Commission has used the discounted cash flow (DCF) methodology for determining the cost of railroad common equity capital. In the notice instituting the 1986 cost of capital proceeding (Ex Parte No. 466), the Commission specifically seeks comment on certain aspects of its DCF methodology, as well as the appropriateness of non-DCF methodologies for determining the cost of equity capital. The Commission staff will be initiating an independent in-house study to recommend alternatives to the DCF methodology. We hope to conclude the study preliminarily by September 1987.

TRUCKING INSURANCE

SENATOR LAUTENBERG: Critics of the Commission have said that the "insurance crisis" in the trucking industry is exacerbated by the Commission's continual reduction in motor carrier reporting requirements. Do you agree? If not, why not?

ANSWER: No. Insurance companies and associations responded to the Commission's proposed reductions in reporting requirements in Docket No. 38904, Elimination of Accounting and Reporting Requirements for Motor Carriers of Property, served March 31, 1987. Their main concern was that the one-page report proposed in that notice contained insufficient data to adequately assess carriers' financial conditions. In response to the various concerns expressed on the record about our one-page proposal, and after weighing the costs and benefits of various alternatives, the Commission adopted a ten-page report form which substantially duplicates the proposal of Arthur Andersen & Co., the consultant for the major motor carrier participants in this proceeding. We believe that the ten-page report finally adopted by the Commission will provide adequate information to the insurance industry to satisfy its information requirements without a detrimental increase in insurance costs. While it is true that Class II carriers will no longer be regularly reporting to the Commission under the newly adopted reporting requirements, our ability to obtain financial information on an as-needed basis should not be impeded. For example, our self-insurance program requires applicants seeking such authority to submit specific financial data for our analysis. Insurance companies should be able to obtain whatever information they need under a similar approach, just as they do when deciding whether to insure non-regulated businesses.

SEPARATE EXPRESSION OF VICE CHAIRMAN LAMBOLEY: My views of reduced reporting are set out in the attached dissent from Docket No. 38904.

OFFICE OF VICE CHAIRMAN LAMBOLEY

NO. 38904

ELIMINATION OF ACCOUNTING AND REPORTING REQUIREMENTS FOR MOTOR CARRIERS OF PROPERTY

March 24, 1987

MEMORANDUM TO CHAIRMAN GRADISON:

Please show me with the following separate expression.

Paul H. Lamboley

cc: All Commissioners
Director Young
Clearance Unit

VICE CHAIRMAN LAMBOLEY, dissenting:

Based upon the record evidence in this case, I would have adopted the following measures:

(1) Prescribed continued use of the Uniform System of Accounts (USOA).

(2) Adopted the 10-page annual report in the form as recommended in the Arthur Andersen Study.

(3) Continued the present filing requirements and forms for quarterly reports, but undertake review of these forms to ensure consistency with the newly adopted 10-page annual report form and the interim filing requirements for self-insured motor carriers.

(4) Required reporting by all Class I and II common and contract motor carriers.

(5) Required expense matrix data from all carriers (not limited to Instruction 27 carriers).

In my view, the Commission also has an obligation to maintain sufficient data in order to carry out certain responsibilities to the public and to Congress.

The record in this case supports the continued filing of meaningful financial data by motor carriers, albeit in a streamlined yet uniform fashion. Federal and state agencies, as well as a wide variety of industries including shippers, carriers and insurance companies support the continuation of such filing requirements.

Although rate changes are today frequently filed on an individual basis, collectively-established general increases are also still filed. The elimination of motor carrier reports will admittedly limit our ability to perform financial analyses in the manner traditionally used by us for collective ratemaking oversight. This decision may well compromise our effectiveness and responsibility in this area.

Likewise, I believe we have a public purpose obligation to provide Congress with adequate and accurate information. These new rules will further undermine and limit the ability to properly profile and evaluate the motor carrier industry.

In sum, I find the record in this case falls woefully short of a sufficient factual basis or rational public purpose to support that which is here being adopted by the majority.

SEPARATE EXPRESSION OF COMMISSIONER SIMMONS: The testimony submitted by the insurance industry in No. 38904 certainly indicated that reduction in motor carrier reporting requirements is viewed with very serious concern. However, the Commission's decision all but ignores this concern and offers its own conclusory justifications for the adoption of reduced reporting requirements. In my dissent to that decision, I stated that I have read few evidentiary records which give a clearer consensus as to the course of action this Commission should follow. The overwhelming weight of the testimony in this proceeding indicates clear and strong opposition to proposals to adopt a one-page quarterly and annual report form, to eliminate the Uniform System of Accounts (USOA) and to discontinue reporting by Class II motor carriers. The parties sharing this view represent a large majority of the motor carrier and insurance industries (including the Regular Common Carrier Conference of the American Trucking Associations, and the American Insurance Association), several shippers groups, and several States and federal government entities.

The commenting motor carrier associations (MCA) jointly engaged the services of Arthur Andersen & Co. to make a comprehensive review of the Commission's accounting regulations and reporting requirements. Andersen was directed to make an objective effort to identify the minimum requirements which would be consistent with the Commission's regulatory responsibilities. The resulting study concluded that the USOA should not be eliminated and reporting by Class II motor carriers should be retained. It further proposed a reduction of the present annual and quarterly reporting forms to a 10-page format which would gather the minimum of information consistent with meaningful reporting.

In ostensible response to these proposals and the overwhelming record evidence in support of them, the majority eviscerated the MCA/Andersen recommendations by only partially adopting the suggested 10-page reporting form. Despite the monolithic opposition of the insurance industry (the American Insurance Association alone represents 174 insurance companies) the majority decision eliminated the USOA and Class II motor carrier reporting. (Indeed, the rules adopted require only 250 of 950 Class I motor carriers to file the complete 10-page report). The National Association of Independent Insurers stated:

> The proposal to eliminate the USOA and to revise the reporting requirements for Class I and II Motor Carriers of property would seriously impede underwriting analysis of individual risks. Any uncertainty concerning the financial standing of a motor carrier could have an adverse effect on availability and affordability of insurance in the market place.

The American Insurance Association emphasized this point in stating that the importance of motor carriers' annual reports cannot be over-emphasized. With regard to the USOA, the Andersen study expressed surprise at the strength of the support for its retention by those outside the industry. "The perception is that the Uniform System of Accounts not only provides consistency of information from carrier to carrier...but also helps assure a degree of quality in the underlying accounting records." In sum, I believe the majority's action virtually ignored the evidence of record.

One justification offered in support of the adopted rules was the claimed elimination of burden hours from motor carriers subject to periodic reporting. My dissent offered a number of opinions which are supported by the record. First, I can see no reason to reduce burden hours below a level that the motor carriers themselves have expressed their willingness to sustain. Second, I question the accuracy of the majority's estimated savings. It is my understanding that the rules adopted will have little effect on the long-standing accounting practices of many motor carriers and may result in minimal real savings of time. Third, even if adoption of the MCA/Andersen recommendations resulted in no time savings at all, the time expended is justified by the need for consistent, reliable financial information clearly shown on the record. Thus, in my opinion, any claim of time savings is at best questionable and at worst a self-serving guess.

Finally, my dissent emphasized disappointment with the majority's weighing of the record in the proceeding. The Commission is the expert decisionmaker and need not totally rely on the evidence submitted in any given case. However, it does not deliberate in a vacuum and in light of the record in the case, the majority's conclusions bordered on the arbitrary and capricious.

SENATOR LAUTENBERG: Should the Commission or the Department of Transportation continue to collect and maintain financial data for all regulated carriers?

ANSWER: The function of collecting and maintaining financial data should be performed by the agency which is the primary user of the data. The data user is in the best position to determine what data are necessary. Whichever agency continues to perform remaining regulatory functions should also collect and maintain the financial data.

SENATOR LAUTENBERG: Is the Commission satisfied that all the necessary carrier safety and fitness data is fully and adequately reported and collected?

ANSWER: The Commission relies upon DOT safety data when processing applications for motor carrier authority unless additional evidence from other parties is necessary to resolve questions about safety fitness. DOT provides the Commission with their most recent safety fitness ratings as well as the safety audit reports which detail the character and frequency of the safety violations. The Commission independently evaluates the information in those reports. Where appropriate, DOT will agree to reaudit an applicant to obtain current safety data. Upon the Commission's request, DOT will also review affidavits of compliance submitted by applicants with less than satisfactory safety ratings. Currently, DOT is attempting to audit all previously unrated carriers and plans to expedite the rating of those carriers that apply to the Commission for operating authority. The Commission is satisfied that generally the safety information provided by DOT allows us to meet our responsibility in this area, although as noted above, there are instances in which more current audit reports are necessary.

SEPARATE EXPRESSION OF VICE CHAIRMAN LAMBOLEY: In my view, certain inadequacies exist concerning evaluation, enforcement and expansion of new authority. I have expressed my views in several dissents.

SEPARATE EXPRESSION OF COMMISSIONER SIMMONS: I cannot agree that the Commission is meeting its responsibility to protect the public from unsafe or unfit motor carriers. Applicants with DOT "conditional" safety ratings are routinely awarded one-year term certificates without any further inquiry by this Commission into their safety fitness. Some of these certificates are now reaching their expiration dates, and it appears that the majority is preparing to extend them for a second year, again without any information on current safety practices. In at least one case, the majority has granted a permanent operating license to a carrier with an "unsatisfactory" safety rating from DOT. See the decision in Jimmy D. Lee Extension - Chemicals Nationwide (not printed), served October 30, 1986. Only in the most egregious cases has the Commission sought to obtain additional evidence on the safety issue.

It is my position that the Commission should conduct its own inquiry in motor carrier application proceedings where the applicant's safety fitness is questioned. In the absence of this independent inquiry, all applications from carriers with a less-than-satisfactory safety rating from DOT should be summarily denied.

SENATOR LAUTENBERG: If the Commission is sunsetted who should or would collect data on the Class I, II, and possibly Class III carriers?

ANSWER: Proposals to sunset the Commission have been predicated upon complete economic deregulation of the motor carrier industry. The Commission primarily uses the financial data which it collects from motor carriers in performing its rates regulation duties. In the absence of motor carrier regulation, the Commission would not need financial data about that industry. To the extent that other government agencies may require financial data from the motor carrier industry, they can, as does the Department of Commerce, collect that information.

SENATOR LAUTENBERG: Should this collection function be performed by private industry? If so, who?

ANSWER: If there were no economic (rate) regulation of the motor carrier industry, the government would have no direct interest in collecting financial data. Some government agencies, such as the Bureau of Labor Statistics, would continue to collect information reflecting the government's general interest, as they do for other unregulated industries. Private parties interested in this data could collect it also, as is currently done in unregulated industries.

SENATOR LAUTENBERG: Are there problems of confidentiality in the collection of this data? If so, please explain.

ANSWER: At the level of detail collected by the Commission there are currently no confidentiality problems. The financial data collected are readily available to the public. Such information is not always publicly available for unregulated, privately held companies.

SANTA FE - SOUTHERN PACIFIC MERGER

SENATOR LAUTENBERG: On March 5 the two railroads, Santa Fe and Southern Pacific, were to submit additional data to the Commission with the possibility that their merger application may be reopened. What is the status of that reopening? When will the Commission decide on whether to reconsider the application?

ANSWER: Applicants submitted the additional data on March 5, 1987. Comments were filed March 25, 1987. The Commission will hear oral argument on the question of whether to reopen for reconsideration on May 14, 1987. A decision on reopening will then be made.

NEW JERSEY CONCERNS

SENATOR LAUTENBERG: The Commission has estimated Conrail's asset base at $3 billion for purposes of a number of Commission calculations. The market sale generated $2 billion for Conrail. Does this imply that there might be more abandonments or that Conrail holds a billion dollars of non-productive assets?

ANSWER: The $3 billion figure attributable to Conrail's "asset base" is not a Commission figure and appears to represent the market value of plant and equipment. The apparent difference between net worth and sales proceeds does not imply that there will be substantial abandonments or that Conrail holds a billion dollars in nonproductive assets. This difference takes into account a variety of investment considerations. Conrail does not have an established dividend history, a factor which may have caused investors to discount Conrail's sale price. Additionally, there are certain restrictive covenants, i.e., limitations in dividends, stock ownership, and future mergers and acquisitions, all having a bearing on the market value and future earnings prospects of the railroad. The total purchase price for Conrail may also take into account some degree of overinvestment and therefore the need for rationalization. However, this cannot be quantified.

SENATOR LAUTENBERG: In the prospectus accompanying the Conrail sale none of the underwriters included the Commission's "revenue adequacy" findings. Since a stock prospectus is supposed to contain all relevant financial data, does this imply that outside the Commission the "revenue adequacy" findings are not treated seriously?

ANSWER: The omission of any specific reference to the Commission's revenue adequacy findings for Conrail does not imply that these findings are not treated seriously. We can only speculate on what Conrail management's and their underwriters' thinking was when the prospectus was developed. The underwriters of the Conrail stock offering and Conrail management may believe that the Commission's finding that Conrail is revenue inadequate is immaterial in the context of full disclosure to prospective investors about Conrail's recent operations and prospects because of the following:

a) A railroad classified as revenue inadequate by the Commission is allowed some limited rate freedom only in certain circumstances, such as on market dominant traffic or on certain light-density lines. Consequently, the impact on Conrail's rate structure from the determination of revenue inadequacy may have been found to be insignificant, based on the nature of its operations.

b) Disclosure that a railroad has been found to be revenue inadequate may cause prospective investors to erroneously believe that a substantial improvement in railroad operating results could result from an ability to charge higher rates. In order to be conservative and to avoid any false optimism, Conrail's underwriters may have omitted any discussion about the railroad's revenue inadequacy finding.

SEPARATE EXPRESSION OF COMMISSIONER SIMMONS: It has been clear for some time that the Commission's revenue adequacy findings are not taken seriously by private analysts and other members of the financial community. To pretend otherwise is to ignore the history of the Conrail privatization. I believe this situation is the result of the extremely narrow focus, and reliance on a single indicator, of our revenue adequacy methodology. I favor studying the use of multiple financial indicators as a possible means of enhancing the credibility of our revenue adequacy findings.

SENATOR LAUTENBERG: Should the Conrail prospectus have contained the "revenue adequacy" findings?

ANSWER: We believe that Conrail's underwriters and management may have had valid reasons for not disclosing in the Conrail prospectus the Commission's finding that Conrail is not revenue adequate. For example, such disclosure might have been immaterial in regard to the railroad's recent operations and prospects.

Further, we note that the section of the prospectus titled "Regulation" addresses changes in the railroad regulatory environment from a broad perspective, rather than how regulation affects or pertains to Conrail specifically. We believe that this general discussion of revenue adequacy is sufficient to convey to the reader the importance of this regulatory objective.

SENATOR LAUTENBERG: The Commission seems to be streamlining its abandonment case processing by not referring cases to Administrative Law Judges and having case synopses prepared by the Chairman's staff. Has using Commission staff rather than Administrative Law Judges slowed down or sped up the decisions in abandonments? (Provide the Committee necessary data to support the answer.)

ANSWER: Timeliness of abandonment decisions is not affected by whether the decision is issued by an Administrative Law Judge (ALJ) or the Entire Commission. Because of the specific statutory provisions for abandonment cases at 49 U.S.C. 10904(c), the same timeframes apply whether a hearing occurs and whether an ALJ or the Commission makes the initial decision. Of course, if a local oral hearing before an ALJ is necessary to a complete record, such a hearing is scheduled.

SEPARATE EXPRESSION OF COMMISSIONER SIMMONS: The Commission has held only seven oral hearings on abandonments over the past two and one half years. During this same period, 314 abandonment applications were filed, not counting notices of exemption and petitions for exemption. The Commission's reluctance to hold oral hearings on abandonments poorly serves the public interest and is inconsistent with the need to conduct "government-in-the-sunshine."

At oral hearing, areas of dispute can be probed through cross-examination in lieu of complete reliance on a written record. The impact of rail abandonments on shippers and local interests can be examined more closely through oral hearing. The holding of an oral hearing in the locality directly affected by the abandonment also counteracts the view of government as a distant body unconcerned with the needs of individual citizens. Given these benefits of the oral hearing process, the Commission's record in this area clearly requires improvement.

COMPETITIVE ACCESS

SENATOR LAUTENBERG: Ex Parte No. 445 (Sub-No. 1), Intramodal Rail Competition, established the ICC procedures for suspension of joint rate cancellations and prescription of reciprocal switching. These rules do not include one of the statutory criteria. Why not? How does the Commission reconcile its Ex Parte No. 445 decision with the statutory requirements?

ANSWER: It has been argued that the Ex Parte No. 445 (Sub-No. 1) rules to obtain suspension (postponement) of a proposed joint rate or reciprocal switching cancellation (as opposed to investigation without suspension) are overbroad. The statute authorizes suspension only if a protestant shows it would be irreparably harmed absent postponement of the tariff change. The Commission, in Ex Parte No. 445 (Sub-No. 1), explained why suspension was appropriate:

> In ordinary rate suspension cases, the harm is higher rates to the shipper, which can be remedied by refunds; in cancellation cases, the remedy is restoration of the through routes and/or joint rates. This operates only for the future, and there is no way to make a protestant whole for the period pendente lite when the cancellation was in effect. Lastly, the loss of competition cannot be remedied [absent suspension] if the connecting carrier or a shipper is forced out of the market and is not able to reenter the market readily.

The Commission's decision in Ex Parte No. 445 (Sub-No. 1) recently was affirmed in Baltimore Gas and Electric Company v. USA and ICC, D.C. Cir., Nos. 85-1761 and 85-1845.

SEPARATE EXPRESSION OF VICE CHAIRMAN LAMBOLEY: I do not believe Ex Parte 445 is co-extensive with all remedial provisions. I noted that concern in my concurrence with Ex Parte 445, and in my dissenting opinions in No. 39021, Midtec Paper Corporation, et al. v. Chicago and North Western Transportation Company, and FD. No. 30858, K&K Warehouse - Exemption From 49 U.S.C. 11104 and 10901(d), served April 23, 1987.

OFFICE OF COMMISSIONER LAMBOLEY

NO. 39021

MIDTEC PAPER CORPORATION, ET AL.
v.
CHICAGO AND NORTH WESTERN TRANSPORTATION COMPANY
(USE OF TERMINAL FACILITIES AND RECIPROCAL
SWITCHING AGREEMENT)

December 11, 1986

MEMORANDUM TO CHAIRMAN GRADISON:

Please show me with the following separate statement.

Paul H. Lamboley

cc: All Commisisoners
General Counsel Burk
Director Mackall
Acting Deputy Director Shaw
Clearance Unit

COMMISSIONER LAMBOLEY, dissenting:

At the outset I considered the possibility that this proceeding had now evolved into two distinct cases: the first being the original 1982 complaint seeking trackage rights and/or reciprocal switching remedies under 49 U.S.C. Section 11103(a) and Section 11103(c) which case had been fully litigated in proceedings before the ALJ, the Review Board, appeal to the Commission,[1] and ultimately, judicial review, and the second being the one now before us on voluntary remand from the court which involves the development of a new and supplemented record coupled with the application of policy under the new guidelines adopted by the Commission in Ex Parte No. 445 (Sub-No. 1).[2]

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[1] Midtec Paper Corporation v. CNW, 1 I.C.C. 2d 362 1985 (Midtec I).

However, on further reflection and review of the record, I find the essence of the case(s) unchanged. The shipper then, and now, is seeking statutory remedy and relief under Sections 11103(a) and (c) on basically the same operative facts; seeking pro-competitive relief for not only price but, and primarily, for service options as well. In my judgment, the shipper had sustained its burden of proof initially and was entitled to relief under either Sections (a) or (c). That remains my view.

Terminal trackage rights and reciprocal switching are pro-competitive statutory remedies, and are to be liberally construed for those purposes.[3] While Ex Parte No. 445 represents a Commission effort to address "competitive access", it is not, however, co-extensive with the remedial provisions of Section 11103. It is in fact, more narrow.

As I observed in my separate expression when we adopted the rules of Ex Parte No. 445, a complainant's rights and remedies are governed by statute, and 445 rules do not obviate statutory protections or requirements. The thrust of Ex Parte No. 445 is rate prescription. In major part, it represents Commission approval of a negotiated agreement reached between the AAR and NIT League as to some, but not all, issues on this general subject matter. While addressing reciprocal switching in the rate context, the Commission expressly rejected the invitation to adopt rules regarding terminal trackage rights.[4]

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[2] Ex Parte No. 445 (Sub-No. 1), Intramodal Rail Competition, 1 I.C.C. 2d 822 (1985).

[3] The remedy of reciprocal switching contained in subsection (c) was added by section 223 of the 1980 Staggers Act to provide "an avenue for relief for shippers where only one railroad provides service." (H.R. Rep. No. 96-1930, 96th Cong. 2d Sess. 116 (1980)) The previous availability of terminal trackage rights was likewise continued. Similarly section 221 (49 U.S.C. 10901) was added to ease competitive entry.

In my view, Ex Parte No. 445, while referencing "all relevant factors" in its rule, nevertheless singularly operates on the negative side of the equation by focusing on negative conduct; that is to say, by requiring a finding of anti-competitive acts as the only premise for remedy. I do not believe 445 rules should be so confined. And more importantly, neither Section 11103 nor its precedent are so limited. In my view, the statutory remedy is positive. It seeks to ensure, protect and encourage a competitive market environment by either or both price and/or service options and is quite properly focused on the pro-competitive aspects of the national transportation policy.[5]

Thus, I believe that availability of statutory relief should not be limited to, and solely predicated on, a finding of anti-competitive acts by a carrier, but may as well be based on a shipper's demonstrable need for price and/or service options that are operationally feasible and practical, or necessary to provide competitive rail service.[6]

Our decision in such matters is a balancing test, weighing both benefits and burdens respectively. The importance of competitive access is enhanced when viewed in the larger context of abandonments, mergers and acquisitions, as well as the establishment of short lines and their opportunities to succeed.

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[4] On remand the majority now blurs any real distinction between terminal trackage rights and reciprocal switching.

[5] See 49 U.S.C. section 10101a.

[6] See 49 U.S.C. section 11103(a) and (c). The majority, while declaring market dominance non-jurisdictional for relief, nevertheless weaves that issue back into the discussion and appendix, joined with a subtle but disclaimed product and geographic competition approach. Likewise, the majority emphasizes the limited circumstances of intermodal transportation, and seemingly ignores the clear intramodal competitive concern of statutory policy. Further, it is acknowledged that as a matter of fact, joint use and/or reciprocal switching are practicable.

The case before us has, in fact, been influenced by both abandonments and acquisitions. Both CNW's abandonments of rail lines and Soo's acquisition of the Milwaukee Road system have had obvious influence on markets available to Midtec.

Finally, I would observe that while I would grant relief to complainants, I am not unmindful of the post-complaint efforts of the Chicago North Western to respond to complainants' concerns. This positive, constructive approach will hopefully be continued and followed by others in their own circumstances, and make more market-based solutions possible. Indeed, in this case, it is evident that litigation and the prospect for relief have had tempering influences. By contrast, I am concerned that the majority's present interpretation restructing the remedies available under section 11103 will have the opposite result.

OFFICE OF VICE CHAIRMAN LAMBOLEY

FINANCE DOCKET NO. 30858

K&K WAREHOUSE - EXEMPTION FROM 49 U.S.C. 11104 AND 10901(d)

April 14, 1987

MEMORANDUM TO CHAIRMAN GRADISON:

Please show me with the following separate expression.

Paul H. Lamboley

cc: All Commissioners
General Counsel Burk
Director Mackall
Deputy Director Dettmar
Clearance Unit

VICE CHAIRMAN LAMBOLEY, dissenting:

I would have requested additional evidence in this proceeding. The majority initially faults petitioner for failing to present sufficient evidence. However, it then proceeds to make various assumptions and reaches numerous conclusions based on the same limited record.

While the propriety of proceeding under Section 10505 is dubious; nevertheless, I would not have dismissed the action. Rarely is the record in exemption proceedings sufficient to evaluate the merits of claims under other substantive provisions. Accordingly, I would have afforded K&K the opportunity to submit additional evidence relevant to remedies available under Sections 10901(d), 11103, and 11104.

Moreover, section 11351 authorizes the Commission, when cause exists, to enter appropriate supplemental orders in rail consolidation cases. At this juncture there may in fact be cause to reopen the 1968 trackage rights proceeding. There is at least the potential that the territorial limitation central to agreement at that time is not consistent with the pro-competitive public policy of Staggers and the current market environment.[1]

Furthermore, there is no rational basis for the dicta which concludes that this line is an exempt spur track. As recognized by the majority, that question depends on a number of factors. We have, however, no evidence about these factors in this case.

Finally, while I agree with the decision to allow K&K to present a proper request under section 11103, I disagree with the majority's attempt to narrow that statutory relief by its decision in *Midtec Paper Corporation, et al.* v. *CNW*, _______ I.C.C. 2d _______ (served December 15, 1986). Unfortunately, the statement that "K&K plainly has not satisfied the standards of section 11103. . .", suggests that the majority sees little prospect for relief.

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[1] Pro-competitive policies were the underpining in decisions in Finance Docket No. 30700, *Chicago and N.W. Transp. Co. and Op - In Campbell County, Wy* (not printed), revised January 15, 1986; Finance Docket No. 30568, *Southern Pacific Transp. Co. - Petition for Declaratory Order - Extension of Rail line* (not printed), served March 29, 1985 (notwithstanding attempts to diminish by distinction); Cf. Finance Docket No. 30186, *Tongue River Railroad Company - Rail Construction and Operation In Custer, Powder River and Rosebud Counties, Mt*, served May 9, 1986.

SENATOR LAUTENBERG: The ICC is authorized to require reciprocal switching to provide competitive rail service. Does the Midtec decision mean that such agreements are only necessary when there is an abuse of monopoly power which the carrier has not remedied by the time the ICC hears the complaint?

ANSWER: Competitive access suits under the Intramodal Rail Competition rules will be decided on the basis of the record established at the time of the filing of a complaint. Under the Intramodal rules, there will typically be a period of notice and negotiation before anticompetitive cancellations of switching or joint arrangements can occur. If private negotiation cannot settle disputes, complainants can bring suit. Commission action would then be based on the state of record at the time of filing of the complaint, because any accommodations offered during the pendency of litigation would be inherently suspect. Of course, parties are free to settle litigation, as they frequently do. But in the absence of settlement, the record at the time of filing would be the principal basis for analyzing the presence or absence of abuse. In Midtec a clear demarkation was not possible, as the suit had been twice before the Commission--once under the pre-Intramodal regime, and the second time to consider the record under the new rules. If the case is being read, however, for the proposition that tactical adjustments made by the carrier during the course of litigation can forestall relief, it is being misread. The Commission would not hesitate to impose relief where an abuse had been demonstrated at any point in time.

SEPARATE EXPRESSION OF VICE CHAIRMAN LAMBOLEY: I disagree with the application of Ex Parte 445 (Sub-No. 1) in the Midtec decision and accordingly filed the attached dissent.

OFFICE OF COMMISSIONER LAMBOLEY

NO. 39021

MIDTEC PAPER CORPORATION, ET AL.
v.
CHICAGO AND NORTH WESTERN TRANSPORTATION COMPANY
(USE OF TERMINAL FACILITIES AND RECIPROCAL
SWITCHING AGREEMENT)

December 11, 1986

MEMORANDUM TO CHAIRMAN GRADISON:

Please show me with the following separate statement.

Paul H. Lamboley

cc: All Commisisoners
General Counsel Burk
Director Mackall
Acting Deputy Director Shaw
Clearance Unit

COMMISSIONER LAMBOLEY, dissenting:

At the outset I considered the possibility that this proceeding had now evolved into two distinct cases: the first being the original 1982 complaint seeking trackage rights and/or reciprocal switching remedies under 49 U.S.C. Section 11103(a) and Section 11103(c) which case had been fully litigated in proceedings before the ALJ, the Review Board, appeal to the Commission,[1] and ultimately, judicial review, and the second being the one now before us on voluntary remand from the court which involves the development of a new and supplemented record coupled with the application of policy under the new guidelines adopted by the Commission in Ex Parte No. 445 (Sub-No. 1).[2]

However, on further reflection and review of the record, I find the essence of the case(s) unchanged. The shipper then, and now, is seeking statutory remedy and relief under Sections 11103(a) and (c) on basically the same operative facts; seeking pro-competitive relief for not only price but, and primarily, for service options as well. In my judgment, the shipper had sustained its burden of proof initially and was entitled to relief under either Sections (a) or (c). That remains my view.

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[1] Midtec Paper Corporation v. CNW, 1 I.C.C. 2d 362 1985 (Midtec I).

[2] Ex Parte No. 445 (Sub-No. 1), Intramodal Rail Competition, 1 I.C.C. 2d 822 (1985).

Terminal trackage rights and reciprocal switching are pro-competitive statutory remedies, and are to be liberally construed for those purposes.[3] While Ex Parte No. 445 represents a Commission effort to address "competitive access", it is not, however, co-extensive with the remedial provisions of Section 11103. It is in fact, more narrow.

As I observed in my separate expression when we adopted the rules of Ex Parte No. 445, a complainant's rights and remedies are governed by statute, and 445 rules do not obviate statutory protections or requirements. The thrust of Ex Parte No. 445 is rate prescription. In major part, it represents Commission approval of a negotiated agreement reached between the AAR and NIT League as to some, but not all, issues on this general subject matter. While addressing reciprocal switching in the rate context, the Commission expressly rejected the invitation to adopt rules regarding terminal trackage rights.[4]

In my view, Ex Parte No. 445, while referencing "all relevant factors" in its rule, nevertheless singularly operates on the negative side of the equation by focusing on negative conduct; that is to say, by requiring a finding of anti-competitive acts as the only premise for remedy. I do not believe 445 rules should be so confined. And more importantly, neither Section 11103 nor its precedent are so limited. In my view, the statutory remedy is positive. It seeks to ensure, protect and encourage a competitive market environment by either or both price and/or service options and is quite properly focused on the pro-competitive aspects of the national transportation policy.[5]

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[3] The remedy of reciprocal switching contained in subsection (c) was added by section 223 of the 1980 Staggers Act to provide "an avenue for relief for shippers where only one railroad provides service." (H.R. Rep. No. 96-1930, 96th Cong. 2d Sess. 116 (1980)) The previous availability of terminal trackage rights was likewise continued. Similarly section 221 (49 U.S.C. 10901) was added to ease competitive entry.

[4] On remand the majority now blurs any real distinction between terminal trackage rights and reciprocal switching.

Thus, I believe that availability of statutory relief should not be limited to, and solely predicated on, a finding of anti-competitive acts by a carrier, but may as well be based on a shipper's demonstrable need for price and/or service options that are operationally feasible and practical, or necessary to provide competitive rail service.[6]

Our decision in such matters is a balancing test, weighing both benefits and burdens respectively. The importance of competitive access is enhanced when viewed in the larger context of abandonments, mergers and acquisitions, as well as the establishment of short lines and their opportunities to succeed.

The case before us has, in fact, been influenced by both abandonments and acquisitions. Both CNW's abandonments of rail lines and Soo's acquisition of the Milwaukee Road system have had obvious influence on markets available to Midtec.

Finally, I would observe that while I would grant relief to complainants, I am not unmindful of the post-complaint efforts of the Chicago North Western to respond to complainants' concerns. This positive, constructive approach will hopefully be continued and followed by others in their own circumstances, and make more market-based solutions possible. Indeed, in this case, it is evident that litigation and the prospect for relief have had tempering influences. By contrast, I am concerned that the majority's present interpretation restructing the remedies available under section 11103 will have the opposite result.

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[5] See 49 U.S.C. section 10101a.

[6] See 49 U.S.C. section 11103(a) and (c). The majority, while declaring market dominance non-jurisdictional for relief, nevertheless weaves that issue back into the discussion and appendix, joined with a subtle but disclaimed product and geographic competition approach. Likewise, the majority emphasizes the limited circumstances of intermodal transportation, and seemingly ignores the clear intramodal competitive concern of statutory policy. Further, it is acknowledged that as a matter of fact, joint use and/or reciprocal switching are practicable.

SEPARATE EXPRESSION OF COMMISSIONER SIMMONS: In my deliberations, I strongly differed with the majority in that I found that the evidence presented by Midtec Paper demonstrated that the defendant railroad, Chicago and North Western, had engaged in certain anticompetitive behavior in the past, and given its position as a monopoly railroad, could do so in the future. This conclusion was supported by the record established by an administrative law judge whose duty was to discern the facts. He determined that CNW had blatantly disregarded Midtec's transportation needs prior to the filing of its complaint. The majority ignored this conclusion and, instead, used "new" evidence, purportedly showing CNW's improved service since the complaint was filed. It was my view that the Commission should have relied more heavily on evidence of CNW's past misconduct as an indication of whether it would be responsive to Midtec's transportation needs in the future. In any event, I maintained that subsections 11103(a) and (c) are not intended to focus simply on the carrier's alleged misconduct or punish a rail carrier with a monopoly for some acts which could be labeled anticompetitive. Rather, the statute requires that the issue the Commission should address is whether the availability of another line-haul carrier has potential for providing needed service and rate options to the affected shipper.

SENATOR LAUTENBERG: Provide for the record the rationale for the Commission's decision in the Midtec case.

ANSWER: The Intramodal Rail Competition rules applied in Midtec require a factual analysis of, among other things, the applicable rates, costs, revenues, and efficiency of the existing and sought arrangements. The essence of Midtec's complaint was that competitive rates and services were not available. But the record showed that CNW had worked with Midtec and Soo to develop competitive rates and service. CNW documented examples of joint rates with the Soo and rate reductions it published for Midtec. That adequate rail service had been made available was supported by the productive experience of the shipper during the periods at issue. Despite vigorous competition in the paper industry, Midtec doubled its output since 1976. It also expanded its markets, as well as its use of rail service.

The Commission's rules adopted in Intramodal are designed to address competitive problems in a fashion that facilitates review. Unlike the antitrust rules which apply to industry generally, the ICC does not require extensive market definition argument or esoteric framing of the issues. Indeed, we permit evidence of abuses that do not rise to the level of cognizable antitrust claims. We will consider high rates or bad service as sufficient in themselves to sustain relief. (The original Midtec decision which we had recalled from the court placed additional burdens on a complainant, but we specifically overruled the earlier case to insure that all potential evidence of abuse can be heard.) Despite the broadened scope of the Commission's competitive analysis, we were unable to find abuse in the Midtec case. In its absence, a grant of relief would have committed rail policy to a fundamentally different course than the one which we believe was proposed by Congress in 1980.

SEPARATE EXPRESSION OF VICE CHAIRMAN LAMBOLEY: My views are set out in the dissenting opinion to the previous question.

SEPARATE EXPRESSION OF COMMISSIONER SIMMONS: Despite the claims of the majority, Midtec had established that it was heavily dependent on rail service for both inbound and outbound traffic and that trucks were only used for very specific, limited traffic. Motor carriers were simply not capable of moving high volume, low value inbound raw materials, especially over long distances. A Soo Line/motor carrier interchange arrangement (involving a short motor carrier transhipment to Midtec's mill) proved costly and inefficient and had to be scrapped.

Midtec presented evidence demonstrating (a) the non-existence of intramodal competition, (b) the highly restricted or limited role of intermodal competition in the paper industry generally, and in Midtec's plant specifically, and (c) the ineffectiveness of such geographic competition as exists to discipline CNW's behavior as it relates to Midtec in the future. On each of the three particulars, CNW failed to rebut Midtec's evidence. Defendant presented only unsubstantiated claims of geographic competition which even the majority found to be inconclusive. Persuasive evidence of past service failures was summarily dismissed because of CNW's current efforts to provide better service.

Meaningful competitive access means more than CNW's willingness to enter into joint rates with the Soo Line. In my dissent I stated that in the context of section 11103(c), the word access must be accompanied by the word "competitive." With the Soo Line able to reach Midtec's facility, the marketplace would have determined the service options available to the shipper. When the Commission evaluated the competitive service test in Midtec, it should have determined whether granting relief would have permitted market forces to dictate the adequacy of service and the level of prices. That is true competitive access. It should not be necessary for a complainant to demonstrate that a railroad had refused to accept interchange or was unwilling to provide service upon request. Inadequacy of existing rail service involves a myriad of problems, such as a need for more competitive rates, alternative routing, more single-line movements, increased access to additional sources of car supply, and more rail participation in its traffic. It was in these areas where CNW had, in the past, come up short. Actions in the past may indeed be indicative of future activity and reliability of service.

SENATOR LAUTENBERG: Provide for the record the Commission's position(s) on the need for the continued antitrust immunity conferred upon the railroads by the Keogh doctrine and section 16 of the Clayton Act.

ANSWER: The Keogh doctrine is a judicially made rule barring an antitrust damage action based upon rates contained in tariffs filed with the Interstate Commerce Commission and is set forth in Keogh v. C&NW, 260 U.S. 156 (1922). The Commission's reasons for opposing retention of Keogh were set forth in the Solicitor General's brief in Square D v. Niagara Frontier Tariff Bureau, 106 S. Ct. 1922 (1986). In Square D, plaintiffs argued that when carriers act outside the limits of their ICC-approved collective ratemaking agreement and fix prices they should be liable for treble-damages under the antitrust laws. The Government's brief explained that the fact that a rate is contained in a tariff on file with the Commission does not mean that the rate has been

reviewed or approved by the agency. We explained that the possibility of an antitrust suit under these circumstances would not interfere with the agency's functions but would be a powerful incentive for carriers to comply strictly with the terms of their Commission approved collective ratemaking agreements.
The Supreme Court rejected this position and affirmed Keogh, stating that the doctrine's interpretation of the statutory scheme has been a part of our settled law for over half a century and that Congress has not seen fit to overturn it during numerous reexaminations of this area of the law.

Clayton Act, Section 16, limits injunctive actions under Sections 2, 3, 7, and 8 of that statute by private parties against carriers subject to the ICC's jurisdiction. These latter sections concern discrimination, price fixing, rebates, and mergers, all of which the ICC regulates under provisions that require assessment of competitive impact as well as other public interest factors. The purpose of Section 3 is to avoid overlapping, or dual, systems of regulation. Courts typically construe the scope of Section 16 narrowly, as is the case with most exemptions from antitrust law. Properly interpreted, Section 16 is not now a bar to the prosecution of anticompetitive activity not regulated by the ICC (See TransKentucky Transp. v. L.&N.R. Co., 581 F. Supp. 759 (1983). Consequently, repeal of the section could invite the interpretation that overlapping jurisdictions have been created. This outcome should be avoided.

RATE REASONABLENESS

SENATOR LAUTENBERG: What actions has the ICC taken to speed up the development of rate guidelines for non-coal commodities (in contrast to the seven years it took in deciding Ex Parte No. 347, Coal Rate Guidelines, Nationwide)?

ANSWER: A notice of proposed rules in Ex Parte No. 347 (Sub-No.2), Rate Guidelines--Non-Coal Proceedings, was served April 8, 1987. Several simplified procedures for evaluating the reasonableness of rates for non-coal commodities and small shipments of coal were proposed in that notice.

The history of Ex Parte No. 347 (Sub-No. 1) is replete with lengthy court litigation, which to some extent explains the delays associated with the development of coal rate guidelines. We do not anticipate that the same problems will plague the non-coal guidelines, particularly in view of the fact that many of the theories applicable to non-coal rates already have been tested and proven in the coal rates area.

Comments on the proposed rules contained in Ex Parte No. 347 (Sub-No. 2) are due by May 26, 1987. The Commission will act expeditiously to bring this proceeding to a conclusion.

SEPARATE EXPRESSION OF VICE CHAIRMAN LAMBOLEY: I am less optimistic as evidenced by my comment in Ex Parte 347 (Sub-No. 2) here attached.

OFFICE OF VICE CHAIRMAN LAMBOLEY

EX PARTE NO. 347 (SUB-NO. 2)

RATE GUIDELINES--NON-COAL PROCEEDINGS

April 1, 1987

MEMORANDUM TO CHAIRMAN GRADISON:

Please show me with the following separate expression.

Paul H. Lamboley

cc: All Commissioners
General Counsel Burk
Director Young
Director Mackall
Clearance Unit

VICE CHAIRMAN LAMBOLEY, commenting:

Principle among my concerns over the Commission's Notice at this juncture are first, its limitations and second, its impact on pending cases.

At the outset, it appears that we are inappropriately reaffirming a predilection and stating an intention to apply CMP guidelines announced in Ex Parte No. 347 (Sub-No. 1)[1]/ to non-coal commodity traffic, no matter the volume, *and* all shippers, no matter the commodity or shipper size.

Notwithstanding almost universal shipper and public interest comments opposing such application, we are nevertheless proceeding from the ANPR stage to NPR stage proposing to do just that.

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[1]/ Ex Parte No. 347 (Sub-No. 1), *Coal Rate Guidelines, Nationwide*, 1 I.C.C. 2d 520 (1985 aff'd *Consolidated Rail Corp. v. United States* Nos. 81-3080, et al. (3rd Cir. February 24, 1987).

Contrary to our observation that comments responsive to our original Notice[2] were "too general to provide the basis for adoption of new rules or guidelines, at this point", it is accurate to say that commentary on the application issue was clear, unequivocal, and overwhelming in opposition to adopting CMP/347 (Sub-No. 1) guidelines for non-coal traffic.[3]

However, our prefatory statement here reiterates that "we continue to believe CMP/347 (Sub-No. 1) guidelines are the most sophisticated and accurate method available for determining reasonableness of captive rates."

Moreover, our apparent agreement with shipper concerns focus primarily on procedural application of CMP/SAC methodology. We agree that "where the cost of preparing and presenting CMP evidence is prohibitive, simplified alternative procedures are needed."[4]

Thus, leaving the CMP standard in place, only two SAC evidentiary options are noticed for comment: (1) formula or standardized replacement costing and (2) revenue to variable cost ratio averaging.[5]

Other issues on which comment is invited likewise tend to be procedural in nature and variations in theme of the CMP methodology.[6]

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[2] Ex Parte No. 347 (Sub-No. 2), Rate Guidelines - Non-Coal Proceedings, Notice served May 22, 1986.

[3] Indeed, some commentators question their efficacy for application to coal traffic.

[4] This was initially identified as a concern in adopting the guidelines, and was noted by one Third Circuit panel member in review of Ex Parte No. 347 (Sub-No. 1). See Baker, J. (concurring in part, dissenting in part) slip op. p. 36.

[5] The proposed "surrogates" for SAC methodology serve to emphasize CMP approach and commitment to its application. However if viewed as truly substantive alternatives then adherence to CMP methodology is undermined as would its application to captive coal traffic.

Further, I regard the inclusion of several significant questions for comment to be inconsistent with the notice provision that the Commission may adopt some or all of the proposals at the close of this round of comments.

While new notice may be appropriate, this may be insufficient to satisfy rulemaking requirements unless of course there is a predisposition to adopt and apply CMP/347 (Sub-No. 1) guidelines. Failure to review comments concerning other specific aspects of CMP methodology, such as revenue adequacy, management efficiency constraints, and differential pricing-elasticities issues in general in relation to non-coal traffic may preclude any further final action.

In short, although broadly worded, this NPR may be too restrictive in approaches noticed and available for Commission action.

My second concern flows from the first, and involves the potential adverse impact that this proceeding may have by delaying decision in pending non-coal rate cases.[7] For example, Amstar and McCarty Farms await Commission decision on appeal for cases initiated in 1981.

This proceeding has already occasioned delay in disposition of those cases. It is reasonable to anticipate the taking of additional comments will substantially defer action in those cases.

Whether CMP or other methodology is ultimately adopted in this proceeding, in my view, sufficient statutory and precedential basis exists upon which to analyze and evaluate rate reasonableness issues and evidence presented in those cases. Thus, it would seem appropriate to move forward in those cases notwithstanding the pendency of this proceeding.

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[6] Certain procedures such as third party dispute resolution by arbitration could conceivably prove to be both substantively and procedurally different from an ICC CMP methodology case. Potential competitive access remedies reviewed and urged by many commentators are given rather cursory linkage and consideration as constraints on captive market rates.

[7] See cases listed in Attachment A.

Attachment A

Ex Parte Docket No.	Title
No. 37010	General Electric Company v. Delaware and Hudson Railway Company, et al.
includes No. 37477	General Electric Company v. Consolidated Rail Corporation, et al.
No. 37478	Amstar Corporation v. The Atchison, Topeka and Santa Fe Railway Company, et al.
No. 37809	McCarty Farms, Inc. et al. v. Burlington Northern Inc.
includes No. 37809 (Sub-1)	McCarty Farms, Inc. v. Burlington Northern Railroad Company
and No. 37815	Montana Department of Agriculture et al. v. Burlington Northern, Inc.
No. 37925	Department of Defense v. Seaboard System Railroad
No. 38088 Remanded 10-10-84	Arizona Public Service Commission v. Atchison, Topeka and Santa Fe, et al.
No. 38125	General Electric Company v. The Baltimore and Ohio Railroad Company, et al.
No. 38188	Westinghouse Electric Corporation v. The Alton & Southern Railway Company, et al.
No. 38238	McGraw Edison Company v. The Alton & Southern Railway Company, et al.

No. 37626	Consolidated Papers, Inc., et al. v. Chicago Pulpwood and North Western Transportation Company, et al.
No. 37760 includes Nos. 39324; 39639; 39686; 39690; 39784; 39812; 39883; 39884; & 39912	Aluminum Co. of America v. LN RR
No. 38239 Filed 3-27-81	Amstar Corporation v. The Alabama Great Southern Railroad, et al.
No. 38446	General Electric Company v. Consolidated Rail Corporation, et al.
includes No. 38636	General Electric Company v. The Chesapeake and Ohio Railway Company, et al.
No. 38638	Cleveland Cliffs Iron Co. v. Chicago & North Western Transp. Co.
No. 39783	Aluminum Company of America v. Rockdale, Sandown & Southern Railroad Company, et al.
No. 40073	South-West Railroad Car Parts v. Missouri Pacific Railroad Co.
No. 40101 Filed 1-13-87	J.M. Huber Corp. v. The ATSF Rwy. Co., et al.
No. 40107	General Electric Co. v. The Atchison, Topeka & Santa Fe Railway Co., Et Al.
No. 40112	Aluminum Co. of America v. Atchison, Topeka and Santa Fe Railway Co.
No. 40131	Ashley Creek Phosphate Co. v. Chevron Pipe Line Co.

SENATOR LAUTENBERG: What is the timetable for a decision regarding non-coal commodities?

ANSWER: Comments to the notice of proposed rulemaking are due May 26, 1987. Assuming the public comments support the validity of one or more of the proposals, a final decision can be expected before the end of the year.

SENATOR LAUTENBERG: A large number of coal rate cases were held in abeyance until the Commission reached a decision in Ex Parte No. 347. What actions is the Commission taking to resolve these cases as quickly as possible?

ANSWER: There are no longer a large number of coal rate reasonableness cases on the Commission's docket. In the past year, the Commission has held "Docket Management Conferences" to prevent delay by either side. Many cases have been settled. Where settlement has proven impossible, record building has been directed.

There are 12 coal rate reasonableness proceedings pending (embracing a somewhat larger number of cases). While most of these cases were held in abeyance for a considerable time awaiting completion of Ex Parte No. 347 (Sub-No. 1), they are now being processed as quickly as possible.

Our ability promptly to issue decisions, however, depends on the parties' readiness. Four of the cases are being held in abeyance at the parties' request while they negotiate. In three others, discovery and negotiations continue concurrently. In one other case, the record should close shortly. Decisions are being prepared in the remaining four proceedings. In two of them, administratively final decisions have already been issued and petitions to reopen are pending.

SENATOR LAUTENBERG: In the coal rate guidelines decision a broad approach was taken regarding apportioning the railroad's fixed costs among shippers. In the Omaha Power v. Burlington Northern Railroad, the broad guidelines produced varying estimates of what would be a reasonable rate. Does the Commission intend to narrow the interpretation of its guidelines?

ANSWER: Evidence in Omaha Public Power District v. Burlington Northern Railroad Company (Omaha) was submitted prior to the isssuance of our final guidelines in Ex Parte No. 347 (Sub-No.-1), Coal Rate Guidelines - Nationwide (Guidelines), which were served September 3, 1985. Although the parties were given an opportunity to update the record, both sides declined. The parties' decision not to supplement the record may in part be explained by the multi-level approach both sides took in developing evidence. Rather than providing a single stand-alone cost analysis, both sides provided various models under the assumption that one or more of their studies complied with the Guidelines. Our decision in Omaha and other forthcoming decisions will provide further guidance to the parties as the methodologies evolve and become more refined. Thus any narrowing of interpretation will occur on a case-by-case basis.

SENATOR LAUTENBERG: Does the Commission plan to develop further interpretation of assessing fixed costs through case-by-case decisions or through Ex Parte proceedings?

ANSWER: The Commission continues to believe that fixed costs must be allocated on the basis of demand if the railroads are to be given the opportunity to cover their costs. Application of this principle continues to evolve as we search for the best way to apply this principle in different types of proceedings. Some interpretation will take place in rulemaking form as we develop our guidelines for non-coal proceedings, while the fine tuning will likely occur in the individual cases.

REVENUE ADEQUACY

SENATOR LAUTENBERG: When does the Commission anticipate issuing a revenue adequacy determination for 1986?

ANSWER: We anticipate a 1986 revenue adequacy determination in the fall of this year, shortly after we make a finding as to the railroads' cost of capital for 1986. The comment period in the 1986 cost of capital proceeding closes June 30, 1987.

SENATOR LAUTENBERG: What steps is the Commission taking to ensure that revenue adequacy determinations are kept more up-to-date (i.e., issued on a more timely basis)?

ANSWER: On April 27, 1987, the Commission issued for public comment a notice proposing an expedited procedure for determining the railroads' cost of capital. Under the timetable in the notice, an annual cost of capital determination will be made by the Commission no later than six months after the close of the year for which the determination is being made. (The proposed timetable allows for the submission of comments by both the railroads and shippers.) A revenue adequacy determination can be made soon thereafter.

SENATOR LAUTENBERG: In Ex Parte No. 393, Standards for Railroad Revenue Adequacy, the method used to measure adequacy was revised, yet the ICC did not change its method for determining the cost of equity. Explain the methodology the Commission uses for determining the cost of equity.

ANSWER: The Commission uses a Discounted Cash Flow (DCF) methodology, a model widely used by State regulatory commissions, for determining the cost of common equity. Under the DCF method, the cost of common equity is the discount rate that makes the present value of expected returns from holding a stock (dividends and price appreciation) equal to the current market value of that stock. The DCF method consists of two variables, current dividend yield and expected growth. Dividend yield is computed by dividing dividends paid by the price of the stock. Expected growth is normally based on investor expectations regarding the growth in earnings per share.

The Commission is seeking comment on the DCF and other methodologies in the 1986 cost of capital proceeding, which is now underway. In addition, the Commission staff is studying alternate methodologies.

SENATOR LAUTENBERG: Recent determination on revenue adequacy found the railroads revenue inadequate in 1985, yet the Commission said it didn't have adequate data to implement certain Commission supported reforms. Why didn't the Commission have adequate data?

ANSWER: In the Ex Parte No. 393 (Sub-No. 1) proceeding the Commission made several modifications to its revenue adequacy standard. Two of those modifications could not be used for the 1985 revenue adequacy determination since their implementation requires data which is not presently reported to the Commission by the railroads.

One modification would require the calculation of return on investment on a system basis by combining all Class I railroads under common control if they form a unified, jointly-managed system. The second would include in the return on investment calculation the results of all majority owned Class I subsidiaries that are integral to rail operations, income taxes related only to rail operations, and interest income associated with working capital investment. Because this information had not been used, railroads were not required to provide it. However, now that it is required, an accounting rulemaking will be initiated, Docket No. 40128, Supplemental Reporting of Consolidated Information for Revenue Adequacy Purposes, to require its submission. This proposal is presently before the Commission.

SENATOR LAUTENBERG: What steps is the Commission taking to collect all the necessary data to implement the revenue adequacy reforms?

ANSWER: The Commission will soon institute a rulemaking proceeding to work out the technical details associated with reporting the new information required by the modifications.

COMMISSION'S BUDGET REQUEST

SENATOR LAUTENBERG: Has the Commission ever analyzed its staff needs based on the requirements imposed by legislation?

ANSWER: Whenever there is a change in the Commission's statutory responsibilities, an extremely close look is taken at the staff resources associated with each legislative provision. On an ongoing basis, the Commission's managers review staff needs related to their functional responsibilities, and the underlying regulatory and legislative requirements, as part of the annual budget development and work planning processes. In addition, resource use and needs, whether staff or dollars, are analyzed by the Managing Director and the executive staff through the quarterly budget and program review process.

RAIL LINE ABANDONMENTS

SENATOR LAUTENBERG: How many field hearings were held in fiscal years 1985, 1986, and 1987 to-date on rail line abandonments? (Provide the date, place, and brief description of the application.)

ANSWER: Hearings relating to rail line abandonment applications were held as follows:

FY 1985 - 4 hearings

October 30, 1984, at Murphysboro, Illinois, regarding Illinois Central Gulf AB-43 (Sub-No. 116).

November 27, 1984, at Centreville, Mississippi, regarding Illinois Central Gulf AB-43 (Sub-No. 123).

April 1, 1985, at Provo, Utah, regarding Denver, Rio Grande & Western AB-8 (Sub-No. 8).

August 27, 1985, at Anthony, Kansas, regarding Santa Fe AB-52 (Sub No. 36) and embracing AB-232 (Sub-No. 1).

FY 1986 - 2 hearings

December 3, 1985, at Douglas City, Nebraska, regarding Union Pacific AB-33 (Sub-No. 26).

April 1, 1986, at Globe, Arizona, regarding Southern Pacific AB-12 (Sub-No. 104).

FY 1987 - 1 hearing

December 12, 1986, at Thomasville, Georgia, regarding CSX Transportation AB-55 (Sub-No. 181).

SENATOR LAUTENBERG: There has been increased public interest in purchasing marginally profitable lines. Is the Commission poised to offer assistance to communities and/or shippers interested in these types of purchases? If so, which offices would offer such assistance?

ANSWER: The Commission recognizes that there has been an increased shipper and community interest in the takeover of rail operations to preserve services considered essential. We are responding to this interest by making every effort to facilitate both the process for acquiring and operating a shortline, and the public's understanding of that process.

The Commission simplified the acquisition/operations process for entering the short-line segment of the industry by adopting rules exempting most acquisitions and operations from regulation under 49 U.S.C. 10901. The Commission's Office of Public Assistance (OPA), is available to answer questions on these exemption procedures and to provide general information about acquiring a short-line. In addition, two available OPA publications, "So You Want to Start a Small Railroad" and "A Guide For Public Participation in Rail Abandonment Cases", both recently revised, discuss extensively the abandonment process and the options available to communities and shippers interested in establishing a short-line operation. OPA also makes available a publication prepared by the Commission's Office of Transportation Analysis (OTA), "Guidelines for Evaluating the Feasibility of Short Line Operations", which examines and defines the many economic, physical, and legal costs and considerations involved. Through OPA and OTA the Commission stands ready to provide technical assistance, data, and general expertise to communities and shippers interested in purchasing lines which have not been profitable operated by Class I railroads.

SENATOR LAUTENBERG: Rail abandonment cases are expected to be more complex because the clearly non-profitable lines have already been granted abandonment. Does ICC have the in-house expertise to handle these more complex cases?

ANSWER: Yes. The Commission's abandonment rules require that applicants file considerable financial and operating data so that the use and cost of the line can be accurately determined. The records are studied by accountants and attorneys with many years of experience in the field.

SENATOR LAUTENBERG: Are outside contracts or consultants in this area planned for fiscal year 1988?

ANSWER: The Commission engages contractors to supplement its small staff of environmental specialists when a case requires specific technical expertise in such diverse disciplines as archeology, hydrology, or ichthyology. Whether such services will be required depends upon the nature and scope of the particular abandonment filing. Since special expertise may be required in evaluating the impact of railroad construction and merger applications, as well as abandonment cases, the Commission is budgeting $100,000 for this type of technical expertise in FY 1988.

SENATOR LAUTENBERG: How much Commission time has been spent (1985 and 1986) and is estimated to be spent (1987 and 1988) on abandonment proceedings (by office)?

ANSWER: The Commission does not keep records detailing the exact amount of staff time spent by case type; resource usage within each office is generally divided by motor and rail work functions, under which work is performed on the various case types. The figures presented here are estimates derived from functional resource levels used or expected to be used in the subject fiscal years.

OFFICE	FY 1985	FY 1986	FY 1987	FY 1988
Proceedings	14	12	11	11
Hearings	*	*	*	*
Transportation Analysis	4	4	4	4
Accounts	3	3	3	3
Public Assistance	6	7	7	7

*Less than 1 staff-year.

RAILROAD ACCOUNTING PRINCIPLES

SENATOR LAUTENBERG: The Commission has been developing a uniform rail costing system (URCS) for a number of years. Final implementation of this uniform costing system has been delayed until the Railroad Accounting Principles Board completed its work. That Board is nearing completion of its work and in a December 15, 1986, letter to the Commission recommended further studies before URCS is adopted. Does the Commission plan to perform the additional analysis suggested by Charles Bowsher's letter?

ANSWER: The research effort proposed by Mr. Bowsher has already been initiated. A complete review of the issues raised in the letter is being conducted by an independent econometrician retained by the Commission who has done research on the costing issues related to the Uniform Railroad Costing System (URCS). We expect that the initial evaluation of URCS will be completed by June 1987.

SENATOR LAUTENBERG: When does the Commission expect to begin the work on testing alternative regression equation forms and testing the size of independent variables as alternatives to reliance on size deflation?

ANSWER: Work on the review of the statistical aspects of URCS began in December 1986, and the initial evaluation is expected to be completed in June 1987.

SENATOR LAUTENBERG: How much of the Commission's resources will be involved in these studies (which offices, how many staff years, outside consultants, expected costs)?

ANSWER: In conducting the studies described in Mr. Bowsher's letter, the Bureau of Accounts will use approximately two staff years in FY 1987. Completing these studies should cost no more than $150,000. In FY 1988, the Bureau may be required to do some additional work on the studies as a result of the formal rulemaking proceeding to implement the URCS recommendations of the Railroad Accounting Principles Board. We expect to incur a total of three to four staff years of additional work on URCS in FY 1988; this will include research, study, and analysis of the results of our regression work and that of others for formulating the final decision to adopt URCS.

SENATOR LAUTENBERG: What will be the Commission's study approach to these two suggestions and what is the timing for your analysis?

ANSWER: The Bureau of Accounts staff, with the assistance of its consultant, plans to conduct a complete review of the URCS regression procedures using a seven-year data base. The consultant is now testing a number of regression forms and reviewing procedures used by the Bureau in its 1980 study to see if and where improvements can be made. Upon completion of this initial evaluation, the Bureau plans to issue a report of the consultant's findings for public comment. Following receipt of comments, a final report will be prepared in the form of a notice of proposed rules. We expect that the notice will be served after the Railroad Accounting Principles Board publishes its final report, now scheduled for August of this year.

SENATOR LAUTENBERG: The December 15 letter encouraged the Commission to study these matters regarding variability with the participation by all interested parties. How will the Commission involve railroad shippers in this effort?

ANSWER: The Commission will release a notice of study for public comment as soon as the review of the URCS regressions is complete.

SENATOR LAUTENBERG: Whom do you consider represents the parties of interest in this regard?

ANSWER: We do not select the parties of interest. The various notices and rulemakings are put out for public comment, in accordance with the requirements of the Administrative Procedures Act and other applicable Federal regulations.

SENATOR LAUTENBERG: The Court of Appeals in the 1982 decision in Western Coal Traffic League v. ICC and USA affirmed the Commission's decision against implementing a productivity adjustment. The court, however, expected the ICC to continuously review the accuracy of its chosen methodology and to revise the index for productivity gains if warranted. The Commission instituted a rulemaking proceeding in this area yet has not rendered a decision. Why?

ANSWER: As a result of the Court decision, the Commission instituted a rulemaking proceeding to consider whether a productivity adjustment should be included in the Rail Cost Adjustment Factor (RCAF) and to solicit comments on specific methodologies for measuring productivity. Comments have been received in response to an Advance Notice of Proposed Rulemaking and both comments and replies have been received responding to a notice of proposed rulemaking. There are extremely complex and difficult issues to resolve.

While we were analyzing the comments and reply statements, the Railroad Accounting Principles Board added consideration of a productivity adjustment to its agenda, and is presently requesting comments through its Exposure Draft. At this time, with the Board's final report scheduled for early August, it will benefit our consideration to await the Board's recommendation.

SENATOR LAUTENBERG: When can a decision by the Commission be expected?

ANSWER: A decision on this issue should be available about six months after the Board's final recommendations are served.

SENATOR LAUTENBERG: The Railroad Accounting Principles Board has concluded that all cost indexes include a productivity adjustment. Is the Commission intending to follow the Board's recommendation?

ANSWER: The Commission is required to implement through appropriate administrative procedures the principles established by the Board. This will be done through the rulemaking process to allow interested parties the opportunity to participate. The final rules which we adopt will reflect our consideration of the comments filed on the record, together with the underlying rationale followed by the Board in developing its principles.

SENATOR LAUTENBERG: Has the Board's conclusion in this area affected the ICC's schedule on the rulemaking proceeding in this area?

ANSWER: Consideration of a productivity adjustment involves several complex issues. With the Board's final report due by early August, it will benefit our deliberation on this matter to have an understanding of the Board's recommendation and to review the comments filed in response to its Exposure Draft.

McCARTY FARMS, INC.

SENATOR LAUTENBERG: What is the status of Docket No. 37809, McCarty Farms, Inc. v. Burlington Northern, Inc., which was filed March 27, 1981? When do you expect a finding on this?

ANSWER: The record in Docket No. 37809 was reactivated by the Chairman on April 16, 1986. Between that date and December 1986, the Commission issued a number of decisions resolving record-related disputes between the parties. The record is now closed, a decision is being drafted, and we intend to resolve the case as soon as possible.

COST CONTROLS

SENATOR LAUTENBERG: What internal controls does the Commission have in place to ensure the integrity of the cost and finance data it develops? Are the controls employed on the body of work which underlies the Commission's Uniform Rail Costing System?

ANSWER: In Ex Parte No. 460, Certification of Railroad Annual Report R-1 By Independent Accountant, served October 11, 1985, the Commission adopted a reporting revision. It requires Class I railroads to submit a report from an independent public accountant stating that specified data in the R-1 have been examined and have been found to be in compliance with the Uniform System of Accounts for Railroad Companies. These accountants must follow specified, agreed-upon review procedures which have been developed by the Bureau of Accounts. Four audit managers from Accounts also audit the work done by the public accountants to ensure that the procedures have been performed and that they are adequate to assure the integrity of the data. In addition to this verification of the accumulation and accounting of cost, financial, and statistical data, the Bureau of Accounts performs desk reviews of the R-1 to further assure that the reported data are accurate. This is done through a computer model which tests data consistency and variation. Inconsistencies are referred to the reporting railroad(s) for verification and correction or explanation, as appropriate. Statistical tests used in regression studies for cost purposes provide an additional test of the validity of the data. Unit costs generated from the applied data are also compared for consistency and traced back to original report sources as necessary. This computer model and accompanying controls are the same body of work underlying the Commission's Uniform Rail Costing System.

SEPARATE EXPRESSION OF VICE CHAIRMAN LAMBOLEY: Attached is my dissenting opinion in Ex Parte No. 460.

OFFICE OF COMMISSIONER LAMBOLEY

EX PARTE NO. 460

NOTICE - CLARIFICATION AND RECONSIDERATION OF FINAL RULE

May 22, 1986

MEMORANDUM TO CHAIRMAN GRADISON:

Please show me with the following separate expression.

Paul H. Lamboley

cc: All Commissioners
Director Mackall
Director Young
Clearance Unit

COMMISSIONER LAMBOLEY, commenting:

As stated in my separate expression in the prior decision served October 11, 1985, I would have deferred action in this proceeding pending completion of the Railroad Accounting Principles Board's re-evaluation of existing accounting requirements. I continue to believe that final action on this reporting revision was premature and so vote.

SEPARATE EXPRESSION OF COMMISSIONER SIMMONS: In my view, the procedures adopted in Ex Parte No. 460 provide inadequate guarantees of the accuracy and integrity of the data reported. These procedures effectively delegate to a public accountant the Commission's responsibility for the reliability of the financial information it must have available in order to discharge its statutory mandate. The decision in Ex Parte No. 460 stems directly from the unwillingness of the Commission over several years to request from Congress the staff resources necessary to meet its responsibilities under the Interstate Commerce Act. It has been followed by a proposal in Ex Parte No. 468 to delegate the preparation and review of rail depreciation studies to public accountants chosen by the rail carriers and with no required expertise in rail depreciation. This proposal likewise is grounded in the inadequate staffing levels in the Bureau of Accounts.

These delegations of responsibility are not in the public interest. They reduce the level of public confidence in the integrity of the Commission's procedures, and I cannot support them.

ASSET VALUATION

SENATOR LAUTENBERG: When a merger involving two or more Class I railroads takes place, on what basis does the Commission determine asset values used in subsequent annual revenue adequacy calculations?

ANSWER: For most mergers the basis for asset valuation is the sum of the respective book values, i.e., original cost less accumulated depreciation.

Certain railroads, as the result of purchase or merger, have had their asset book values written down to reflect the market value of those assets, as established by acquisition cost. These written down values (which are reported in the railroads' R-1 reports) often vary considerably from the historical or current replacement cost of the railroads' assets, and if used for revenue adequacy purposes, could result in a material understatement of the railroads' revenue requirements. In these circumstances, the Commission has elected in the past to use the "predecessor value" of those railroads' assets, which represent their book value immediately prior to writedown. For the 1985 determination of revenue adequacy, predecessor value data were used for 6 of the 24 Class I railroads: the Boston & Maine, Conrail, Delaware & Hudson, Seaboard System, Chicago & Northwestern, and Western Pacific.

SENATOR LAUTENBERG: Has the Commission been consistent in the methodology used for asset valuation? If not, why not?

ANSWER: The Commission's procedure for asset valuation has been consistent from year to year, with two notable exceptions. Beginning with the year 1983, Annual Report Form R-1 data have been reported using depreciation accounting (DA) in lieu of retirement-replacement-betterment accounting (RRB). Asset valuations for 1983 and 1984 were determined using both methods of accounting, with DA being used for the determination of revenue adequacy for information purposes only. Beginning in 1985, only

DA has been used. The second exception is the fact that, beginning with the year 1985, accumulated deferred income tax credits are subtracted from the net investment in road and equipment to arrive at a net investment base for revenue adequacy purposes.

SENATOR LAUTENBERG: What would be the reasons (rationale) for using alternative approaches to asset valuation?

ANSWER: Asset valuation has as its objective the accurate measurement of railroad investment costs for regulatory purposes. Revenue adequacy is determined on the basis of historical costs, a valuation approach widely accepted by regulatory bodies because of the data's objectivity and verifiability. The only alternative basis of valuation is the current cost basis. The reason for using current costs instead of historical costs is that the former, by taking inflation into account, will generally provide a more accurate portrayal of the current cost of replacing long lived assets. To date, the Commission has not succeeded in developing a workable procedure for developing current costs for revenue adequacy purposes.

SENATOR LAUTENBERG: What are the possible methodologies that the Commission might use for determining asset values? (Briefly describe each.)

ANSWER: Essentially there are two bases of valuation the Commission can use, historical or current cost. Under the historical cost basis, the net investment base is developed from prices originally paid for the investment. Historical costs are the book values of rail assets as reported by the railroads. Predecessor values are a form of historical costs representing the original cost of rail assets when first dedicated to public service. As previously discussed, predecessor values have been used to measure the revenue adequacy of railroads whose assets have been written down as the result of purchase or merger.

Rail assets can also be valued on the basis of their current replacement cost valuation or "current cost." By taking the effect of inflation into account, the current cost basis of valuation generally produces higher asset values.

COST RECOVERY

SENATOR LAUTENBERG: In January the Commission served a decision in which it determined the 1985 and 1986 cost recovery percentage should be 342.5 percent using 1981 data. The Commission rejected a lower cost recovery percentage of 179.5 based on 1983-1984 waybill data because the Commission felt the data was inaccurate. Why was the data inaccurate?

ANSWER: The Cost Recovery Percentage (CRP) of 179.5 rejected by the Commission was calculated from the 1984 costed waybill file. The waybill data is inaccurate because of the effect of an overstatement of contract traffic revenues. This overstatement arises from the fact that the actual rate paid by the shipper for traffic moving under contract is, in many instances, lower than the rate shown on the waybill. This results in overstated revenues which produce a CRP significantly lower than it would be if all waybill sample revenues were accurate. Our conclusion that revenues from the waybill file are overstated was confirmed by comparison of cost and revenue data from the R-1 annual reports filed with the Commission.

SENATOR LAUTENBERG: Shouldn't more current data provide a more accurate cost recovery picture?

ANSWER: No. The problem is related to the amount of traffic moving under contract rates. The number of contracts on file with us has risen at a steady and dramatic rate since the passage of the Staggers Rail Act. In mid-1981, less than a year after the effective date of that Act, there were 189 contracts on file. By the end of the year there were 768. At the end of 1982 there were 4,016 on file. At the end of 1983, there were 12,301, 1984 - 19,871, 1985 - 32,039, 1986 - 47,254, and thus far in 1987 - 50,568. As time passes, any usefulness the cost recovery percentage may have had vanishes unless the contract problem can be corrected.

SENATOR LAUTENBERG: What steps is the Commission taking to correct the inaccuracy problem?

ANSWER: In several of our recent CRP decisions, we have discussed this problem and sought comments in the form of specific solutions. (The fact that no party has provided suggestions underscores the severity of the problem.) We are currently conducting a research project to determine whether an accurate CRP can be estimated by applying a different procedure within the process now being used. The new procedure would adjust for the overstatement in revenue derived from contract rates. We are not optimistic that the overstated contract revenues can be eliminated from the waybill file itself. The nature and confidentiality of contract rates, as well as other practical considerations, preclude identification of contract movements included in the waybill file or the rates actually paid on contract shipments.

SENATOR LAUTENBERG: When will the Commission be serving a new cost recovery percentage decision?

ANSWER: Completion of the next CRP decision will depend in large part on the success of our research project in determining an alternative way to read the CRP from the costed waybill file. Notwithstanding this, we expect to issue a decision by fall of 1987.

SENATOR LAUTENBERG: On what data will that decision be based?

ANSWER: The 1985 costed waybill file would normally be the basis for our next CRP decision. However, if an accurate CRP value cannot be calculated from that file, we would be required to fall back to the last calculated value which was from the 1981 file.

ICC DOCKET No. 38904

SENATOR LAUTENBERG: Specifically, how will ICC Docket No. 38904 reduce the reporting requirements of Class I and Class II motor carriers?

ANSWER: Class II motor carriers will be totally relieved of reporting requirements. Instead of about 2,700 motor carriers filing reports periodically, now only about 950 Class I carriers will have to report. For Class I carriers the quarterly report form will be reduced to a one-page format of summary data, and the annual report form will be reduced to ten pages. This will result in a total reduction of about 535,000 hours in reporting burden.

SEPARATE EXPRESSION OF COMMISSIONER SIMMONS: With regard to this and the next four questions, please refer to my earlier separate statement on this matter.

SENATOR LAUTENBERG: Why has the vote on this proceeding been delayed?

ANSWER: The notice of proposed rulemaking for Docket No. 38904, Elimination of Accounting and Reporting Requirements For Motor Carriers of Property, served February 20, 1985, proposed a significant reduction in reporting burden. The proposed extensive reporting revisions prompted a joint petition by the American Trucking Associations, Inc. (ATA) and the Regular Common Carrier Conference (RCCC), as well as a petition by the Household Goods Carriers' Bureau, Inc., for more time to consider the issues. A six-month extension for comments was granted. The ATA, RCCC, and fourteen other carrier associations filed a joint response as the Motor Common Carrier Association. The Association engaged the accounting firm of Arthur Andersen & Company to assist in a comprehensive review to study the impact of the proposed rulemaking. The study found a substantial need for industry financial information and proposed two alternative report forms--the preferred Arthur Andersen ten-page report and an alternative twenty-nine page report. These proposals and issues raised by other respondents presented a wide range of disparate views, requiring substantial in-depth review before voting on the final decision.

SENATOR LAUTENBERG: Briefly describe for the Committee the Commission's decision in Docket No. 38904 decided on March 13, 1987.

ANSWER: The Commission approved revisions to motor carrier reporting to reduce the compliance burden on the carriers by requiring only that data which are used on a regular and frequent basis. The new rules are effective for the 1987 reporting year.

Instead of about 2,700 motor carriers filing reports periodically, only about 950 carriers will have to report. The quarterly report form is reduced to a one-page format of summary data, and the annual report form is reduced to ten pages. Only Class I motor carriers will be required to file the new report forms with the Commission; Class I contract motor carriers that derive 100 percent of their operating revenues from contract carriage will be exempt from reporting. The Uniform System of Accounts (49 CFR Part 1207) will remain in the Code of Federal Regulations for reference purposes but no longer will be required.

SEPARATE EXPRESSION OF VICE CHAIRMAN LAMBOLEY: I did not share the majority's views; accordingly my dissent is attached.

OFFICE OF VICE CHAIRMAN LAMBOLEY

NO. 38904

ELIMINATION OF ACCOUNTING AND REPORTING
REQUIREMENTS FOR MOTOR CARRIERS OF PROPERTY

March 24, 1987

MEMORANDUM TO CHAIRMAN GRADISON:

Please show me with the following separate expression.

Paul H. Lamboley

cc: All Commissioners
Director Young
Clearance Unit

VICE CHAIRMAN LAMBOLEY, dissenting:

Based upon the record evidence in this case, I would have adopted the following measures:

(1) Prescribed continued use of the Uniform System of Accounts (USOA).

(2) Adopted the 10-page annual report in the form as recommended in the Arthur Andersen Study.

(3) Continued the present filing requirements and forms for quarterly reports, but undertake review of these forms to ensure consistency with the newly adopted 10-page annual report form and the interim filing requirements for self-insured motor carriers.

(4) Required reporting by all Class I and II common and contract motor carriers.

(5) Required expense matrix data from all carriers (not limited to Instruction 27 carriers).

In my view, the Commission also has an obligation to maintain sufficient data in order to carry out certain responsibilities to the public and to Congress.

The record in this case supports the continued filing of meaningful financial data by motor carriers, albeit in a streamlined yet uniform fashion. Federal and state agencies, as well as a wide variety of industries including shippers, carriers and insurance companies support the continuation of such filing requirements.

Although rate changes are today frequently filed on an individual basis, collectively-established general increases are also still filed. The elimination of motor carrier reports will admittedly limit our ability to perform financial analyses in the manner traditionally used by us for collective ratemaking oversight. This decision may well compromise our effectiveness and responsibility in this area.

Likewise, I believe we have a public purpose obligation to provide Congress with adequate and accurate information. These new rules will further undermine and limit the ability to properly profile and evaluate the motor carrier industry.

In sum, I find the record in this case falls woefully short of a sufficient factual basis or rational public purpose to support that which is here being adopted by the majority.

SENATOR LAUTENBERG: Will this decision affect the amount of resources required by the Commission for collecting and filing motor carrier data? How?

ANSWER: Yes. The decision substantially reduces the number of reports to be processed, since only Class I carriers will be reporting. This will result in fewer reports to be mailed, received, filed, traced, and compiled.

SENATOR LAUTENBERG: Has this been reflected in the fiscal year 1988 budget request?

ANSWER: Yes. The Fiscal Year 1988 budget request contains a reduction of 10 positions for the Bureau of Accounts, five of which are due to the reduction in motor carrier accounting and reporting requirements.

TRUCK DATA

SENATOR LAUTENBERG: The Motor Carrier Act of 1980 deregulated entry into the industry, a by-product being many Canadian firms expanding their operations in the U.S. Has the ICC or DOT stepped up their efforts to collect data so that the impact of increased Canadian competition can be measured? If not, does the ICC have plans to do so?

ANSWER: Although the Commission captures data on the number of Canadian motor carriers granted ICC operating authority, it does not collect data that measures or evaluates market competition between U. S. and Canadian carriers in the United States. Neither are we aware of any data collection programs by DOT. We are aware, however, that the General Accounting Office, at the request of the Senate Commerce Committee, is conducting a study involving trans-border trucking. We understand that the purpose of the review is to determine, if possible, the impact of disparate policies on U. S. motor carriers competing with Canadian truckers in the marketplace.

In view of the relatively modest number of new Canadian entrants, at least in the regulated transportation sector, the ICC has no plans to establish any new effort to measure the impact of Canadian competition in U. S. markets at this time.

SENATOR LAUTENBERG: Has the Commission worked with DOT or Customs to gather and/or analyze the data regarding increased Canadian truck operations?

ANSWER: There is no specific DOT, Customs, ICC project per se studying increased Canadian truck operations in the United States. However, the Commission's computerized data file captures and is capable of comparing the number of U. S. and Canadian motor carriers holding ICC operating authority during any given period. For example, the total numbers of active carriers at the end of each year from 1979 to 1986 were as follows:

	U. S. Carriers	Canadian Carriers
1979	17,780	470
1980	20,434	586
1981	24,038	689
1982	27,237	722
1983	30,132	812
1984	33,437	920
1985	36,550	1,055
1986	41,076	1,231

The above figures show that over the eight-year period Canadian carriers totaled an average of approximately 2.5 percent of all ICC regulated carriers annually.

This information is shared with DOT and Customs and is generally the subject of discussion during meetings of the U. S.-Canada Motor Carrier Consultative Mechanism.

SENATOR LAUTENBERG: Has the ICC ever conducted an economic analysis of the potential impact of assessing the heavy vehicle use tax on Canadian truckers?

ANSWER: The Commission has not conducted such a review. However, we are informed that, in compliance with Section 930 of the Deficit Reduction Act of 1984, DOT has a study underway which includes, in part, the heavy vehicle use tax feature. A report is due to Congress by October 1, 1987.

SENATOR LAUTENBERG: The United States and Canada in 1984 established a consultative mechanism to resolve transborder trucking disputes. Does the ICC participate in the consultative mechanism?

ANSWER: Yes. The Commission has participated in the U. S.-Canada Motor Carrier Consultative Mechanism since its inception. The meetings held through this process have afforded the participants helpful opportunities to learn about U.S. and Canadian regulations, policies, and practices and to look for ways to resolve issues and problems related to cross-border operations.

DEPRECIATION SCHEDULE STUDIES

SENATOR LAUTENBERG: What is the status of Ex Parte No. 468 regarding the review of railroad depreciation studies by independent public accountants?

ANSWER: An advance notice of proposed rulemaking entitled "Review of Railroad Depreciation Studies by Independent Public Accountants" was served on February 25, 1987, with responses due by April 27, 1987. The response date was subsequently extended to May 18, 1987.

SENATOR LAUTENBERG: What is the response to Commissioners Lamboley's and Simmons' concern that the effect of Ex Parte No. 468 would be delegation of section 11143 responsibilities to the rail carriers?

ANSWER: Section 11143 requires the Commission to prescribe rates of depreciation used to determine depreciation charges that are included in operating expenses. The Commission will continue to prescribe rates of depreciation in accordance with this section. Ex Parte No. 468 merely changes the procedure governing the completion and review of depreciation studies. By no means will the Commission's adoption of the procedures proposed in Ex Parte No. 468 result in abrogation of its statutory responsibility under section 11143 to prescribe depreciation rates.

SENATOR LAUTENBERG: What amount of resources does the Commission, the Bureau of Accounts and others, expend in the preparation and review of depreciation studies?

ANSWER: As a result of Finance Docket 37281, *Railroads Performing Depreciation Studies*, the Commission does not prepare depreciation studies requiring a commitment of agency resources. The Class I railroads, however, are required to prepare at the minimum an equipment depreciation study every three years and a road property study every six years. Each study takes between 3 and 6 months to complete and costs the carrier approximately $50,000. Presently, the review of depreciation studies is performed by the Bureau of Accounts, requiring 5 to 8 staff weeks of effort per study (a total of approximately two staff-years assuming a normal schedule of review). A minimal amount of additional Commission resources are expended for serving orders prescribing depreciation rates for each of the Class I railroads.

SENATOR LAUTENBERG: Is the proposal to adopt new procedures regarding depreciation studies a result of not having enough resources to do the job? Please explain.

ANSWER: The Commission always seeks ways to create efficiencies and streamline its work processes. Our proposal in Ex Parte No. 468, if adopted, should benefit both the railroads and the Commission because it will result in the timely completion of depreciation studies and prescription of depreciation rates.

SEPARATE EXPRESSION OF COMMISSIONER SIMMONS: The above answer is not responsive to the question. The proposal in Ex Parte No. 468 stems directly from the inadequate staffing levels in the Bureau of Accounts.

When the proposal in Ex Parte No. 468 was circulated for voting, I requested information from the Bureau of Accounts on the status of our review of depreciation studies. Their reply was provided on February 5, 1987. I am attaching a chart from that reply which gives information for individual rail carriers. This chart supports my view that staffing levels have been inadequate for timely completion of reviews.

DEPRECIATION STUDIES

Railroad	Road	Equipment
ATSF	Current	3-yrs. behind
BN	In process	In process
CSX	In process	In process
CNW	Current	Current
Conrail	note 1	note 1
DRGW	Current (T)	2-yrs. behind
EJ&E	Current	3-yrs. behind
FEC	Current (T)	2-yrs. behind
GTW	Current (T)	3-yrs. behind
Guilford (A)	note 1	note 1
ICG	note 2	note 2
KCS	1-yr. behind	Current
MKT	Current	3-yrs. behind
NorSou (B)	Current	Current
SOO	note 2	note 2
SP (C)	1-yr. behind (T)	4-yrs. behind
UP	Current	note 2

Notes: 1- Relieved temporarily
2- Railroad preparing studies for our review
(A) Includes Boston & Maine and Delaware & Hudson
(B) Includes Norfolk & Western and Southern Railway
(C) Includes St. Louis Southwestern
(T) Depreciation studies on track structure to be completed in FY 1987

COMMISSION STAFFING

SENATOR LAUTENBERG: Provide for the record the Commission's staffing levels for fiscal year 1987 by office and by month. Provide the full-time equivalents and part-time employees for each office.

ANSWER: The following chart displays for the beginning of each month, by office, the number of full-time permanent and other employees on board for Fiscal Year 1987.

FY 1987 ONBOARD EMPLOYMENT

		OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.
Commissioners	Full-time Permanent	40	39	39	39	41	40	39
	Other	5	4	4	4	2	2	1
	TOTAL	45	43	43	43	43	42	40
Secretary	Full-time Permanent	69	68	68	72	74	72	72
	Other	15	16	15	11	11	11	11
	TOTAL	84	84	83	83	85	83	83
General Counsel	Full-time Permanent	22	22	22	22	19	20	21
	Other	2	2	2	2	2	2	2
	TOTAL	24	24	24	24	21	22	23
Proceedings	Full-time Permanent	123	121	121	119	118	119	119
	Other	3	3	3	3	2	2	2
	TOTAL	126	124	124	122	120	121	121
Hearings	Full-time Permanent	5	5	5	5	5	5	5
	Other	0	0	0	0	0	0	0
	TOTAL	5	5	5	5	5	5	5
Public Assistance	Full-time Permanent	11	12	13	13	13	14	14
	Other	0	0	0	0	0	0	0
	TOTAL	11	12	13	13	13	14	14
Transportation Analysis	Full-time Permanent	29	29	28	28	28	28	28
	Other	0	0	0	0	0	0	0
	TOTAL	29	29	28	28	28	28	28
Accounts	Full-time Permanent	76	74	73	72	71	71	71
	Other	6	6	6	7	7	7	7
	TOTAL	82	80	79	79	78	78	78
Traffic	Full-time Permanent	69	69	68	68	68	71	70
	Other	0	0	0	0	0	0	0
	TOTAL	69	69	68	68	68	71	70
Compliance and Consumer Assistance	Full-time Permanent	190	189	193	195	196	198	200
	Other	5	4	6	7	9	8	8
	TOTAL	195	193	199	202	205	206	208
Managing Director	Full-time Permanent	68	68	68	69	69	69	70
	Other	4	5	4	5	5	5	5
	TOTAL	72	73	72	74	74	74	75
TOTAL	Full-time Permanent	702	696	698	702	702	707	709
	Other	40	40	40	39	38	37	36
	TOTAL	742	736	738	741	740	744	745

SENATOR LAUTENBERG: Provide for the record a description (for each month) of the number and kinds of employees detailed. (Include in the description the office from which the employees come and to which offices they were detailed).

ANSWER: The following chart provides the requested information on the total of 6 employees who have been on short-term details during Fiscal Year 1987.

FY 1987 DETAILED POSITIONS

MONTH	PERMANENT POSITION	PERMANENT OFFICE	DETAILED POSITION	DETAILED OFFICE
October				
	Trial Attorney	General Counsel	Attorney-Adviser through December 1986	Chairman's Office
	Associate Director	Proceedings	Statement of Duties (Director's Office) through April 1987	Compliance and Consumer Assistance
January				
	Attorney-Advisor	Proceedings	Attorney-Adviser through May 1987	Chairman's Office
February				
	Attorney-Adviser	Proceedings	Statement of Duties (Energy and Environment) through April 1987	Transportation Analysis
	Attorney-Adviser	Proceedings	Attorney-Adviser through May 1987	Commissioner Lamboley's Office
March				
	Trial Attorney	General Counsel	Attorney-Adviser through July 1987	Commissioner Sterrett's Office

SENATOR LAUTENBERG: What is the Commission's definition of "special appointment" in regards to employee staffing?

ANSWER: The Commission uses the term "special appointment" for employees having all types of appointments other than full-time permanent. This includes full-time employees with temporary appointments, part-time employees (permanent or temporary), and intermittent employees.

SENATOR LAUTENBERG: How many days is the average special appointment employed?

ANSWER: The special appointment employee, who is an other than full-time permanent employee, averages 4 days per week. Temporary employees are usually hired for a period of one year.

SENATOR LAUTENBERG: Provide for the record the amount of overtime paid ICC employees for each month in fiscal year 1987 by office.

ANSWER: The monthly overtime costs for each Bureau and Office during Fiscal Year 1987 follow.

FY 1987 OVERTIME

BUREAU/OFFICE	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	TOTAL
Commissioners and their Offices	$0	$300	$200	$0	$0	$100	$600
Secretary	300	5,100	0	800	2,100	6,700	15,000
General Counsel	100	1,400	100	100	100	500	2,300
Proceedings	300	0	0	500	1,700	900	3,400
Hearings	0	0	0	0	0	0	0
Public Assistance	0	0	0	0	0	0	0
Transportation Analysis	0	0	0	0	0	0	0
Accounts	0	0	0	0	0	0	0
Traffic	0	0	0	0	0	0	0
Compliance and Consumer Assistance	2,900	2,200	600	500	200	100	6,500
Managing Director	1,000	0	0	0	0	100	1,100
Total	$4,600	$9,000	$900	$1,900	$4,100	$8,400	$28,900

SENATOR LAUTENBERG: What is the total amount of estimated overtime for the full fiscal year 1987?

ANSWER: The Commission has budgeted $85,000 for overtime in FY 1987.

SENATOR LAUTENBERG: How much overtime by office did the Commission pay in fiscal years 1985 and 1986?

ANSWER: The overtime costs for each Bureau and Office during Fiscal Years 1985 and 1986 are shown below. Overtime was used by the Bureau of Traffic in FY 1985 to accomplish work on purging the files of old tariffs. Subsequently, a new process was adopted to allow for purging to be accomplished during regular work hours. Overtime was used by the Office of Compliance and Consumer Assistance in FY 1986 to handle the unusually high volume of motor licensing revocations precipitated by the insurance crisis and for the handling of complaints during the transition to the new field structure.

Overtime by Office

BUREAU/OFFICE	FY 1985	FY 1986
Commissioners and their Offices	$1,100	$1,300
Secretary	21,900	16,400
General Counsel	1,200	2,800
Proceedings	1,700	3,200
Hearings	0	0
Public Assistance	0	0
Transportation Analysis	0	0
Accounts	0	0
Traffic	20,600	100
Compliance and Consumer Assistance	800	19,200
Managing Director	1,900	4,700
Total	$49,200	$47,700

SENATOR LAUTENBERG: How much overtime is estimated or budgeted for fiscal year 1988?

ANSWER: The Commission has budgeted $50,000 for overtime during FY 1988.

SENATOR LAUTENBERG: For the record provide the actual funds expended and the number of full-time equivalents by office for fiscal years 1985 and 1986 versus the authorized levels for those years provided in the appropriations report.

ANSWER: The following charts detail the authorized funds and staff-year or full-time equivalent levels, including supplemental appropriation and reprogramming actions, and actual expenditures for Fiscal Years 1985 and 1986.

FY 1985

	AUTHORIZED		SUPPLEMENTAL/ REPROGRAMMED		ACTUAL	
BUREAU/OFFICE	($000)	STAFF	($000)	STAFF	($000)	STAFF
Commissioners and their Offices	$3,000	65	$4,009	62	$3,754	54
Secretary	2,420	64	3,582	85	3,213	82
General Counsel	1,350	25	1,733	29	1,776	28
Proceedings	8,520	160	8,298	152	8,836	149
Hearings	825	12	848	12	774	11
Special Counsel	475	7	719 *	12	715	12
Transportation Analysis	1,720	30	2,274	35	2,339	35
Accounts	6,850	113	6,167	111	6,280	107
Traffic	3,900	90	3,239	82	3,402	79
Compliance and Consumer Assistance	13,200	260	14,268	277	14,609	273
Managing Director	5,740	88	5,963	92	4,599	86
Total	$48,000	914	$51,100	949	$50,297	916

* Reflects the transfer of the Small Business Assistance Office from the Chairman's Office.

FY 1986

	CONFERENCE REPORT		GRAMM-RUDMAN REDUCTION		REPROGRAMMED		ACTUAL	
BUREAU/OFFICE	($000)	STAFF	($000)	STAFF	($000)	STAFF	($000)	STAFF
Commissioners and their Offices	$3,375	56	$3,236	54	$3,206	48	$3,072	44
Secretary	3,100	85	2,973	81	3,465	85	2,985	81
General Counsel	1,800	27	1,726	26	1,768	27	1,709	26
Proceedings	8,600	150	8,247	143	8,637	140	8,102	133
Hearings	570	8	547	8	566	8	426	7
Public Assistance	525	7	503	7	841 *	14	751	11
Transportation Analysis	2,400	30	2,302	29	2,375	30	2,304	30
Accounts	6,910	100	6,626	96	5,648	91	5,374	86
Traffic	3,800	81	3,644	77	3,386	75	3,158	72
Compliance and Consumer Assistance	14,400	257	13,809	246	13,952	246	13,629	238
Managing Director	5,000	88	4,795	84	4,564	82	4,202	78
Total	$50,480	889	$48,408	851	$48,408	846	$45,712	806

* Reflects the transfer of positions from the Chairman's Office in order to form the new Office of Public Assistance.

SENATOR LAUTENBERG: Provide the same information (best estimate) for fiscal year 1987.

ANSWER: The following chart details the authorized funds and staff and the reprogrammed funds and staff for Fiscal Year 1987.

FY 1987

BUREAU/OFFICE	AUTHORIZED ($000)	AUTHORIZED STAFF	REPROGRAMMED ($000)	REPROGRAMMED STAFF
Commissioners and their Offices	$3,200	47	$3,305	47
Secretary	3,550	85	3,331	85
General Counsel	1,810	27	1,862	27
Proceedings	8,450	130	8,256	130
Hearings	455	6	380	6
Public Assistance	920	15	1,047	15
Transportation Analysis	2,430	30	2,441	30
Accounts	4,820	75	4,840	75
Traffic	3,300	75	3,392	75
Compliance and Consumer Assistance	13,300	218	13,423	218
Managing Director	4,620	82	4,578	82
Total	$46,855	790	$46,855	790

SENATOR LAUTENBERG: Does the Commission have adequate staffing for reaching a decision on the ten major motor carrier rate bureau agreements initially filed in 1980 and supplemented in 1984?

ANSWER: The Commission has adequate staffing for reaching a decision on the ten major motor carrier rate bureau agreements.

Since January 1986, we have made considerable progress on these cases. All rate bureau cases, including those involving the ten major rate bureau agreements, were assigned to staff for review and preparation of decisions. From January 1986 through April 1, 1987, we issued 20 substantive decisions in pending cases. Yet, we have not cleared as many of the cases as we had hoped. Delays occurred earlier due to the complex nature of the cases and the fact that staff had not been thoroughly trained to deal with these issues. That situation has been corrected and no additional staff is necessary to complete these cases.

SENATOR LAUTENBERG: When will the Commission act to grant or deny final approval on the ten or any one of the ten agreements?

ANSWER: It is anticipated that the Pacific Inland Tariff Bureau agreement will receive final approval in April 1987. In eight of the remaining cases, decisions have been issued provisionally approving the bureaus' amended agreements and preserving immunity pending further modifications and final decisions. In each of these eight cases, a second decision requiring additional modifications to the agreements is either being prepared subject to a strict timetable or is under review. (The additional modifications result from the bureaus' non-compliance with all Commission directives issued in the initial decisions.) These further decisions will be issued by the close of the fiscal year. Initial provisional approval of the tenth agreement is pending and is being expedited.

SENATOR LAUTENBERG: Who, which offices, are responsible for evaluating the quarterly reporting forms required of self-insurers?

ANSWER: The Office of Compliance and Consumer Assistance (OCCA) has the lead responsibility for the monitoring and evaluation of the quarterly and annual reports required of self-insured carriers, with financial review assistance provided by the Bureau of Accounts (BOA).

SENATOR LAUTENBERG: Are there any transportation issues which might require staffing increases? (Please elaborate.)

ANSWER: It is reasonable to anticipate a continuation of current transportation trends, which include formation of regional and shortline railroads, intermodal acquisitions, and the gradual easing of problems related to obtaining motor carrier insurance. While these trends are likely to result in some peaks and valleys in workload, we believe we can shift resources within and among offices as the needs arise. At this time, we do not foresee trends requiring increased regulatory oversight and resulting staff increases.

SEPARATE EXPRESSION OF COMMISSIONER SIMMONS: I continue to believe that additional staffing resources beyond those included in the OMB budget passback are necessary, particularly in the Office of the Secretary, the Bureau of Accounts, the Office of Proceedings, and the Office of Hearings. These resources are required to assure timely processing of insurance filings, handling and oversight of motor carrier self-insurance proposals, consideration of complex abandonment and merger applications, and receipt and review of essential carrier financial data.

Above all, I also cannot support OMB's cutback in staffing for the Office of Human Relations.

SENATOR LAUTENBERG: Provide for the record the Commission's response to each of the recommendations of the Commission's Insurance Task Force in Ex Parte No. MC-178 (Sub-No. 3) and whether the adoption of any recommendation would require increased or decreased staffing.

ANSWER: The Insurance Task Force's report, which was recently submitted to the Commission, was divided into three parts containing administrative, marketplace, and legislative recommendations. Currently, the Commission's staff is reviewing the reports and will advise the Commission on the merits, feasibility, and courses of action which the Commission may want to consider regarding the recommendations.

We are hopeful that the Task Force's comments and recommendations will identify solutions, either through changes in Commission rules, through suggestions to Congress for legislative changes, or through market-based solutions. However, since the Commission has not yet considered the Task Force's report, we cannot comment on the substance of the recommendations or the impact they may have on staffing at this time. We will be pleased to make this information available to the Committee as soon as Commission consideration has been accomplished.

EFFICIENCY

SENATOR LAUTENBERG: It has been alleged that the Commission's figures indicating adherence to statutory case processing timeframes include instances where the Commission has had to invoke either 49 USC Sec. 10322 (i) (non-rail) or 49 USC Sec. 10327 (j) and Sec. 10327 (k) (rail). Is that true or false?

ANSWER: Section 10322(i) has been invoked by the Commission on occasion. However, these instances are few when compared to the total number of licensing applications filed, processed, and finally determined. Since 1980, the Commission has received well over 100,000 applications for motor property, passenger, freight forwarder, and broker authority. In 1980 and 1981, the first 2 years of the Motor Carrier Act of 1980, the total numbers of application filings were 22,735 and 28,414, respectively. The number of annual filings since then has never been less than 12,000. On an annual basis, the number of applications in which extensions were granted has never exceeded .3 percent of the total number of applications filed.

On the rail side, extensions under section 10327(j) and (k) have been taken. In relation to the number of rail related decisions served each year, extension activity is minimal.

SENATOR LAUTENBERG: Provide for fiscal years 1980 through 1986 by year, by transportation mode, the number of cases in which extensions of the initial statutory timeframes have been taken by the Commission.

ANSWER: Commission records show few instances in which the Commission extended statutory timeframes for motor carrier, broker, and freight forwarder cases. The number of extensions involving these types of cases are:

FY 1980	0
FY 1981	8
FY 1982	21
FY 1983	19
FY 1984	44
FY 1985	12
FY 1986	5

Several specific issues of first impression acccounted for most of the extensions. For instance, in fiscal year 1984, most extensions were in cases in which applicants were seeking motor contract carrier household goods authority and involved Commission establishment of policy regarding a proper class of shippers for household goods contract service. In other years, delays involved applications by Canadians and the moratorium imposed on granting Canadian carriers operating authority, applications addressing applicants' fitness, willingness, and ability to provide bulk service, and applications for special and charter passenger authority by recipients of governmental financial assistance. As can be seen, the Commission has not used section 10322(i) to delay carrying out its responsibilities to process applications and issue authorities as efficiently and expeditiously as possible. On the rail side, the following table shows extensions of statutory timeframes taken during the past 7 years.

EXTENSIONS

	49 USC 10327(j)	49 USC 10327(k)
FY 1980:	Not Available	8
FY 1981:	Not Available	15
FY 1982:	Not Available	12
FY 1983:	2	22
FY 1984:	27	5
FY 1985:	41	14
FY 1986:	24	11

DEPARTMENT OF TRANSPORTATION

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

STATEMENT OF M. CYNTHIA DOUGLASS, ADMINISTRATOR

ACCOMPANIED BY:

LOUIS W. ROBERTS, DIRECTOR, TRANSPORTATION SYSTEMS CENTER
LLOYD E. MILBURN, DIRECTOR OF EMERGENCY TRANSPORTATION
RICHARD L. BEAM, DIRECTOR, OFFICE OF PIPELINE SAFETY
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ROBIN A. CALDWELL, DIRECTOR, OFFICE OF AVIATION INFORMATION MANAGEMENT

INTRODUCTION OF WITNESSES

Senator LAUTENBERG. The next witness is Ms. Douglass. We welcome now Ms. Cynthia Douglass, the Administrator of the Research and Special Programs Administration, and we ask you, if you would, to very quickly introduce your associates and proceed with your statement.

We welcome you here. We think your Department has an important function to perform.

STATEMENT OF MS. DOUGLASS

Ms. DOUGLASS. I have a full statement which I have submitted for the record, so I have a summary statement that I would like to make this morning.

Senator LAUTENBERG. We appreciate it.

Ms. DOUGLASS. First, I wanted to say that I am very pleased to be here today to present our budget request for fiscal year 1988 and also to report on the activities we have accomplished and are accomplishing in fiscal year 1987.

INTRODUCTION OF ASSOCIATES

Before I begin, I would like to introduce the office directors of the programs within RSPA. To my far right is Robin Caldwell. Robin is the Director of the Office of Aviation Information Management. His office is responsible for collecting and analyzing the air carrier financial and statistical data for use by the Department, other federal agencies and the private sector.

Next to me on my right is Al Roberts, the Director of the Office of Hazardous Materials Transportation.

To my far left at the end of the table is Lou Roberts. Lou is the Director of the Transportation Systems Center in Cambridge, MA. TSC serves as our multimodal research and analysis facility for Department of Transportation issues.

In the middle is Lloyd Milburn. Lloyd is the Director of the Office of Emergency Transportation. His office is responsible for carrying out the Department's role in coordinating the transportation community during emergency situations ranging from natural disasters such as earthquakes to postnuclear attacks. He is also responsible for the contingency planning that goes on within the federal government in the case of a natural disaster.

To my left is Dick Beam. Dick is the Director of the Office of Pipeline Safety.

The directors are here today so that we can be extremely responsive to your questions.

BUDGET REQUEST

Last year RSPA asked for and received both a dollar increase and a staffing increase for hazardous materials transportation and for pipeline safety. Today, our total budget request is for $22,643,000 as compared to last year's appropriation of $19.9 million. You pointed out it was about a $2.6 million increase we are requesting.

The amount reflects a budget level slightly higher than last year's with two exceptions. The two exceptions are: First, the Office of Hazardous Materials Transportation request is for an increase of $1.5 million over last year; and second, the Office of Pipeline Safety request is for about $1.1 million more than we requested last year. Also, in Hazardous Materials we are requesting an additional seven staff positions.

I will concentrate my summary on Hazardous Materials Transportation and Pipeline Safety, because these are the primary safety programs in RSPA.

SUMMARY OF OHMT BUDGET REQUEST

Last year in hazardous materials transportation, you may recall that there were several important studies and reports completed. In particular, we had the Secretary's Safety Task Force Report and the Office of Technology Assessment Report, and also our own Hazardous Materials Advisory Committee Report. All of these reports were aimed at improving safety in hazardous materials transportation and identified areas for special attention. RSPA participated to a great extent in all of the studies and, in short, we agree with the gist of the recommendations.

The highlighted areas of concern in these reports are: The issuance of performance-oriented standards for small packages; better coordination between the federal agencies involved with hazardous materials transportation; an improved data base; routing of hazardous materials; driver and handler training; rules for emergency response training and planning; application of the hazardous materials rules to intrastate carriers; and the multiplicity of state and local laws for hazardous materials transportation.

RSPA has been working to address these problems. The problems really are very complex and are often expensive to address, but we do believe that they are all very important.

Among our significant accomplishments are the issuance of a notice of proposed rulemaking for performance-oriented standards; the completion of a draft memorandum of understanding with the Federal Emergency Management Agency setting out our two agencies' roles in emergency response; and establishment with FEMA of an information clearinghouse to provide state and local emergency response planning officials with information related to hazardous materials transportation.

We have also conducted federal, state and regional workshops on hazardous materials transportation and nuclear transportation.

We completed with FEMA a report on hazardous materials training, planning and preparedness.

We have also taken action to fill the 12 positions that you approved for the Office of Hazardous Materials. Seven of those positions have been filled, and action has been completed to fill another four. One position is still under active recruitment.

In the remainder of this year and in fiscal year 1988, we will continue work on our cargo tank safety rule and our performance-oriented standards. We expect to publish regulatory proposals covering explosives, insurance, training requirements, incident reporting, odorization of LP gas, emergency response requirements, and requirements for applying the interstate rules to intrastate carriers.

We also expect to implement a limited registration program. We are going to comprehensively review our data base and our data needs. We are going to continue our outreach efforts with the state and federal agencies. We are going to republish and distribute the Emergency Response Guidebook.

We expect to send to Congress an administration proposal for reauthorization of the Hazardous Materials Transportation Act.

With respect to the Office of Pipeline Safety, I also expect a very significant policy year. Secretary Dole's safety task force is now beginning a review of our pipeline safety program, and that review is expected to be completed sometime this summer, probably toward the end of the summer.

This past year the Office of Pipeline Safety has undertaken a number of very important projects. First, OPS successfully implemented and collected about $8.2 million in user fees from the pipeline industry. I think that you should be aware that the legislation underlying our user fee program is currently under challenge in Federal District Court. I am fairly confident that the law will be upheld.

SUMMARY OF OPS BUDGET REQUEST

In 1986 we completed three major projects which were aimed at improving management of our pipeline safety inspection. First, we subdivided the pipeline companies into pipeline inspection units. This will ensure that all parts of the pipeline company will be comprehensively inspected in the future.

It has also enabled us to better determine our staffing requirements. We have assessed our staffing requirements and believe that, with some reallocation of inspection units among the region chiefs, we can comprehensively inspect each pipeline unit an average of every 2½ years with a pipeline inspection staff of 20. That is our budget request.

Second, we have worked with the states to develop a priority inspection of pipeline programs. We have rated criteria for determining the safety risk of a particular inspection unit. This program which is being tested in the field this year will assist us in determining which pipelines should be inspected first and more often.

Third, we have completed a revision of our enforcement manual which governs the procedures and policy of our enforcement inspection staff. That manual had not been revised since the beginning of the program, about 10 years. So that was a large task and has been completed.

We also have underway a complete review of our enforcement procedures, and upon completion we may make further changes in our enforcement manual.

There will be a number of legislative initiatives in the pipeline area this year. I also know that the NTSB will make some recommendations. I promise the committee that the Office of Pipeline Safety and I will keep an open mind and respond professionally and objectively to these ideas. Our objective is to assure the safety of these pipelines within certain defined regulatory bounds and undefined cost benefit bounds.

For perspective, pipelines are our safest mode of transportation. Our safety jurisdiction covers more than 1.5 million miles of natural gas pipeline and 154,000 miles of hazardous liquid pipeline. In 1986 there were 23 natural gas pipeline fatalities and 106 injuries. There were three hazardous liquid fatalities and 32 injuries. Of those 32 injuries, 26 were in one accident. Twenty-six people went to the hospital because they had inhaled some gasoline fumes, and they wanted to make sure they were OK. They were OK. They were released from the hospital. So of those 32, there were about 6 probably more serious injuries.

PREPARED STATEMENT

Senator LAUTENBERG. Ms. Douglass, I wonder if you have much more of your statement, because I would ask if you can summarize your remaining remarks. As we agreed earlier, we will take your full statement in the record.

Can you do the rest in a minute or two?

Ms. DOUGLASS. Yes; I am at the end.

Overall, I believe we do have a very good pipeline safety program and that our spending and priorities are about right. That really goes for all of the RSPA programs, and so I am ready to respond to your questions.

[The statement follows:]

STATEMENT OF M. CYNTHIA DOUGLASS

Good morning, I am pleased to be here today to present the President's budget request for the Research and Special Programs Administration (RSPA) for Fiscal Year 1988.

This request reflects Secretary Dole's on-going commitment to a safe and efficient transportation system—a commitment which I wholeheartedly share. We are requesting a total of $22,643,000 for FY 1988 as compared to our FY 1987 appropriation of $19,950,000. This total reflects $13,039,000 for Research and Special Programs and $9,604,000 for Pipeline Safety. The Consolidated Omnibus Budget Reconciliation Act of 1985 established a user fee mechanism for funding the entire cost of the Pipeline Safety Program. Because user fees (assessed and collected) are tied to the annual appropriation process and because they fund the total cost of a substantial program in RSPA, it is appropriate that a separate appropriation be created for presentation and adoption of the RSPA Pipeline Safety Program.

Currently, RSPA has responsibility for the following programs:

- Office of Hazardous Materials Transportation (OHMT) - OHMT is responsible for a national safety program to protect against risks to life and property inherent in the transportation of hazardous materials in commerce (other than bulk transportation on board vessels).

- Office of Pipeline Safety (OPS) - OPS is responsible for the development and enforcement of regulations necessary to ensure the safe transportation of hazardous liquids and natural gas by pipeline.

- Aviation Information Management (AIM) - The AIM program provides consistent and comprehensive air carrier financial and statistical data that portrays the results of operations in the air transportation industry.

- Transportation Systems Center (TSC) - TSC's mission is to provide research and analysis support to all of the DOT operating administrations, the Office of the Secretary, and other Federal agencies.

- Office of Emergency Transportation (OET) - OET's responsibility is to assure there is an organizational structure and procedures for the continued viability of the Department as well as the operation of this country's civil transportation system to meet defense and essential civil needs in the event of a national emergency.

- Transportation Safety Institute (TSI) (in the Office of Program Management and Administration) - TSI conducts comprehensive training programs in transportation safety and security for Federal, State, and local government officials involved with all modes of transportation; e.g., training State truck safety inspectors.

- Communication and Radionavigation (Telecommunications) (in the Office of Program Management and Administration) - RSPA coordinates Departmental policy and research and development of civil and military radionavigation systems for land, air, and marine users.

- Statistics, Data, and Information (in the Office of Program Management and Administration) - RSPA has the general responsibility for planning, developing, and coordinating a comprehensive transportation statistics and information program.

RSPA's FY 1988 budget request represents an increase of $2.7 million over the enacted level for the FY 1987. Some significant highlights are:

- An increase of $1,497,000 in budget authority and seven permanent positions in the Office of Hazardous Materials Transportation, to allow

RSPA to initiate several of the important recommendations in the Secretary's Task Force Study of the Hazardous Materials Program. In addition, it will allow RSPA to continue the Federal/State relationships established for assisting States in developing their hazardous materials enforcement and emergency response capabilities.

- An increase of $1,081,000 in the pipeline program. Major increases include $500,000 in budget authority to fund the natural gas and hazardous liquid pipeline safety grant program and $196,800 for additional training. The additional grant program funding will allow States to increase their inspection activity.

Office of Hazardous Materials Transportation (OHMT)

RSPA is requesting an appropriation of $8,710,200 to carry out the Hazardous Materials Transportation Program. This figure includes $7,765,200 for operations and $945,000 for research and development. It reflects an increase of seven positions and $1,497,000 in budget authority to continue to carry out the recommendations of Secretary Dole's Safety Task Force. A description of the positions requested is in our FY 1988 budget submission.

The safety record for the transportation of hazardous materials in the United States has been very good. Last year, of the 5,671 incidents nationwide involving hazardous materials transportation, there were 16 fatalities and 315 injuries. A chart of incidents occurring from 1977-1986 is attached as Appendix III.

I am committed to ensuring that this excellent record continues. The budget for FY 1988 will allow RSPA to continue the following safety programs at an appropriate level.

(1) Collection of safety data;

(2) Enforcement of safety regulations and coordination of activities of all modes relating to hazardous materials transportation enforcement;

(3) Continuation of rulemaking;

   (a) cargo tank specifications

   (b) performance oriented packaging standards,

   (c) recodification of DOT's explosive regulations,

   (d) a broad spectrum of proposals covering such areas as [illegible]ance, training for all persons involved in handling hazardous materials, and incident reporting, and

   (e) training standards for drivers and handlers of hazardous material.

(4) Support for training of Federal and State hazardous materials transportation safety inspectors at TSI and develop self-teaching packages for use on-the-job in field situations;

(5) Continuation of Federal/State workshops on hazardous materials transportation;

(6) Distribution in 1988 of the Emergency Response Guidebook to the emergency response community; and

(7) Continuation of hazardous materials safety research and development.

A more detailed description of our hazardous materials program follows.

Our FY 1987 appropriation included 12 additional positions for OHMT. Eleven of these positions have been filled or will be filled shortly since candidates have been selected, but have not yet reported to work. One position is still under active recruitment.

Several actions recommended by the Secretary's Safety Task Force will require funding in FY 1988. (An update on the status of the recommendations will be submitted for the record.) A total of $310,000 (including $95,000 for R&D) is requested to broaden the capability and flexibility of the Hazardous Materials Information System (HMIS). These system enhancements will support our decisionmaking and policy development process, enable us to do specialized statistical reports and trend analyses, and make the HMIS more accessible to other Federal, State, and local potential users. In addition, we plan to conduct a pilot study of a limited hazardous materials registration program which will begin in FY 1988 and require $220,000.

The priority rulemakings for FY 1987 and continuing into FY 1988 are: A rulemaking action which proposes performance-oriented packaging standards rather than specification standards, a new hazardous materials table and improved hazard classing procedures; and a rulemaking action which addresses the design, maintenance, and testing of highway cargo tanks, such as those used to deliver gasoline and other fuels.

RSPA has completed a draft NPRM on performance-oriented packaging standards. We have received the green light for publication and expect it to be in the Federal Register next week. The cost of publication is expected to be $80,000.

The cargo tanks safety rule has produced significant controversy. DOT has received numerous comments and counter proposals, many of which are substantial. The complexity and scope of the issues addressed by the commentors substantially exceeded that expected and has lengthened the evaluation process. Accordingly, DOT began during March and is continuing in April 1987, a series of public working meetings with these commentors to clarify the meaning of their comments and discuss the alternative proposals they have made in their comments. These working meetings will be open to the public.

Because of the complexity of the rulemaking and the time-consuming process of resolving the many diverse issues, we hope to be in a position to publish a final rule on cargo tanks by FY 1988.

During the remainder of FY 1987 and in FY 1988, RSPA expects to publish proposals covering explosives, insurance, training requirements, incident reporting, odorization of LP gas, and acetylene cylinders. RSPA also has ongoing projects to rewrite and update existing rules on high pressure cylinders and the carriage of hazardous materials by motor vehicle.

The OHMT is responsible for the enforcement of regulations applicable to the manufacture, reconditioning, and retesting of DOT specification containers, and multimodal transportation of hazardous materials. Assistance is provided to other DOT Administrations, other Government agencies, and State organizations in inspection and enforcement matters. The Enforcement Division provides assistance, within the Department to the Federal Highway Administration, the U.S. Coast Guard, and the Federal Railroad Administration. The five DOT Administrations involved in hazardous materials enforcement (FHWA, USCG, FAA, FRA, and RSPA) will execute an agreement on coordination in the latter part of FY 1987. OHMT also assisted the Department of Energy in conducting a pre-transportation inspection of the first spent fuel shipment from Three-Mile Island, Pennsylvania, and a shipment of radioactive waste from Monterrey, Mexico, to Idaho. RSPA conducted joint inspections of facilities handling radioactive materials with the State of Florida, and conducted inspections with and provided training to the Connecticut State Fire Marshall's Office concerning the manufacture and transportation of compressed gas cylinders.

A key to the effectiveness of our enforcement efforts has been RSPA's interaction with the States. In FY 1987 and continuing in FY 1988, we are sponsoring the COHMED workshops. With FHWA's Office of Motor Carrier Safety, these workshops foster the working relationships we have developed under the State Hazardous Materials Enforcement Development (SHMED) program. It is through COHMED that the Federal and State people responsible for hazardous materials transportation share information regarding regulations, training, interpretation, enforcement, and research which will assure a better regulatory scheme and more uniformity. Both goals provide the public with an increased level of safety. These workshops have been very successful. In fact, we have initiated a number of their recommendations including developing and establishing procedures to provide for the uniform interpretation of the Hazardous Materials Transportation Act and hazardous materials regulations; the development of a menu-driven program to enable States to tap into the Department's exemptions data base; development of a Hazardous Materials Modular Inspection/Enforcement Training Proposal; and development of a COHMED newsletter, the "Reporter."

We have also initiated a series of workshops focused on radioactive materials transportation issues. These workshops were implemented by RSPA with the cooperation of DOE, NRC and FEMA to develop a coordinated and cooperative effort among State, Indian Nations, and Federal agencies which have regulatory and enforcement responsibilities for assuring the safe transportation of these radioactive materials. The agencies share information regarding routing of nuclear materials, emergency preparedness and response to accidents, inspections and enforcement, and notification of shipments.

In FY 1987, RSPA and the Federal Emergency Management Agency (FEMA) initiated the Hazardous Materials Information Exchange System. The exchange has been developed to help state and local emergency response officials plan for hazardous materials emergencies. It provides for a toll free telephone number and an electronic bulletin board accessible by any personal computer having a communications capability. The user can obtain up-to-date information on hazardous materials training, planning events and conferences, and emergency response experiences.

RSPA has also taken the lead within the Department in developing a Memorandum of Understanding (MOU) with FEMA on emergency response. The MOU defines the roles and responsibilities of each agency in emergency response planning, training, and equipment. A draft has been prepared and is undergoing Departmental review.

Another key to better enforcement and uniformity is the training of State enforcement personnel, much of which is conducted at RSPA's Transportation Safety Institute. In FY 1988, RSPA is requesting $279,000 to cover partial costs of staffing and training at the Transportation Safety Institute. The State share of funding for training can be substantially met through dollars received from MCSAP, a Federal grant program carried out under the Surface Transportation Assistance Act as amended. In order to be able to use tuition fees to provide funding support for our TSI training effort, our budget request proposes specific language permitting the fees to be credited to the RSPA appropriation. Such language appears in our FY 1987 appropriations as well as that of two other DOT Administrations.

We are requesting increased funding to update, print, and distribute some 35 items of training materials for enforcement and emergency response personnel, including inspectors, firefighters, police, and emergency medical service personnel. Approximately 12,000 copies of these training materials are distributed each month.

We also plan to develop new guidance materials. We develop these materials to assure that information on changing regulatory requirements is disseminated, understood and uniformly implemented across the country. The need for these materials will increase significantly as States expand their hazardous materials enforcement and emergency response capabilities.

In FY 1988, RSPA is requesting an increase in funding to carry out our responsibilities under the Nuclear Waste Policy Act. The public and the Congress continue to express great interest in the transportation of radioactive materials. The debate surrounding the implementation of the Nuclear Waste Policy Act is expected to intensify. We are involved with this process through our participation in numerous meetings and workshops striving for resolution of the many issues related to the safe transport and disposal of our Nation's commercial spent nuclear fuel.

It is expected that when the legal issues surrounding the Department of Energy's proposed siting of a Monitored Retrievable Storage (MRS) facility in Tennessee are resolved, DOT will be called upon to substantively comment on the adequacy of various MRS transportation schemes. We are developing an in-house capability to provide an independent assessment of the MRS proposal.

RSPA also represents the Department in several international forums that develop international standards for the transportation of hazardous materials. Application of international standards by governments throughout the world has a direct economic impact on U. S. hazardous materials shippers and carriers involved in export trade. The various international organizations in which RSPA participates are as follows:

1. The United Nations Committee of Experts on the Transport of Dangerous Goods, and its subsidiary bodies -
   (a) The Group of Experts on Explosives; and
   (b) The Group of Rapporteurs;

2. The International Maritime Organization Committee on the Carriage of Dangerous Goods;

3. The Dangerous Goods Panel of the International Civil Aviation Organization;

4. The Group of Experts on the Transport of Dangerous Goods of the Economic Commission for Europe Inland Transport Committee; and

5. The International Atomic Energy Agency.

RSPA's objective in the past and continuing in the future is to ensure that the standards adopted by these international bodies provide satisfactory levels of safety and do not create artificial trade barriers to the U. S. hazardous materials industry. Some important areas involving future international activity include new standards, and adjustments to standards, pertaining to explosives, performance-oriented packaging, and radioactive materials.

Finally, reports or studies legislatively mandated or requested by Congress are summarized as follows:

1) Study of the Joint Use of Vehicles for Transportation of Hazardous and Nonhazardous Materials - EPA, in consultation with DOT, has prepared a report on the problems associated with the use of vehicles for both hazardous substances and nonhazardous cargoes. The report is expected to be transmitted by April 15.

2) DOT/FEMA Report on Hazardous Materials Training, Planning, and Preparedness - The report was forwarded to Congress last year. Recommendations for funding are being developed and will be transmitted shortly.

3) Report to Congress on the implementation of Secretary Dole's Safety Task Force Review of the hazardous materials program. Transmitted to Congress shortly.

Office of Pipeline Safety (OPS)

RSPA is requesting an appropriation of $9,603,800 to carry out the pipeline safety program. This figure includes $3,954,800 for operations and $649,000 for research and development. We are requesting $5,000,000 for the Pipeline Grant-in-Aid Program.

The passage of "user fee" legislation established separate budget authority for the pipeline safety program in FY 1988. The implementation of the pipeline user fee legislation has been very successful. RSPA has identified gas and hazardous liquid operators liable for the user fee; established a schedule of fees for pipeline usage; and carried out collection of the assessments. The Committee should know that the "user fee" is under challenge by MAPCO in Federal District Court. The merger of the natural gas program and the hazardous liquid program, as mandated by the Consolidated Omnibus Budget Reconciliation Act of 1985, has also been implemented.

Additionally, as directed by the committee, RSPA has assigned two more pipeline inspector positions to the Kansas City, Missouri, regional office to increase pipeline inspections in that region. One inspector has been hired, and we are in the process of hiring the second. It is anticipated that the position will be filled shortly. As further directed by the committee, RSPA has formulated a plan to provide for a series of comprehensive inspections of each of the 15 operators with facilities located in the State of Minnesota in FY 1987.

Pipelines are our safest mode of transportation. RSPA's safety jurisdiction over natural gas pipelines covers more than 2,300 operators of a gas pipeline network of more than 1.5 million miles. The responsibility for hazardous liquid pipelines involves over 170 operators and more than 154,000 miles of pipeline which transport petroleum, petroleum products and anhydrous ammonia. In 1986, of the 219 natural gas pipeline failures occurring nationwide, there were 23 fatalities and 106 injuries. Of the 203 hazardous liquid pipeline failures nationwide, there were 3 fatalities and 32 injuries. A summary of the causes of gas and hazardous liquid incidents for 1986 is attached as Appendix I. In addition, Appendix II reflects gas and hazardous liquid pipeline accidents and casualties over a 10-year period.

In 1968, Congress passed the Natural Gas Pipeline Safety Act directing the Secretary to establish safety regulations for facilities used in the transportation of natural gas and other gases by pipeline. In 1979, the Department's authority was extended to the transportation of hazardous liquids by pipeline.

Both Acts set up State grant-in-aid programs to provide for State enforcement of the pipeline safety rules. The success of the natural gas and hazardous liquid pipeline safety programs is reflected in the overall decline in gas and liquid pipeline failures since 1978. Outside force damage, principally damage by mechanized excavation equipment, continues to be the single major cause of pipeline failures. To address this problem, the gas pipeline regulations now require operators to have a damage prevention program. A similar rule for hazardous liquid pipelines is being initiated in FY 1987. RSPA encourages operator participation in a utility locator system so that persons contemplating excavation can use the "one call" utility locator to receive information on the exact location of pipelines in that area. RSPA has been encouraging the States to pass legislation requiring damage prevention programs. Presently, only 15 states and Puerto Rico have not enacted damage prevention legislation.

In 1986, RSPA completed a project which allows us to better manage our inspection program. We introduced the concept of operator inspection units. Each unit represents a portion of an extensive pipeline system (or all of a small size system) under the control of a responsible management element of an operator. This concept is efficient and enables us to direct inspection activity to the systems of greatest need. RSPA identified 1200 units and intends to perform a comprehensive inspection of each unit on an average frequency of 2.5 years. At the same time, RSPA initiated a verification process for operator incident and annual report data and, in 1988, will implement a computer program to help establish priorities in scheduling safety inspections. RSPA will institute this program in its regional offices as well as provide this information to its State partners.

In 1987, RSPA published an Enforcement Manual, providing a one-source compilation of inspection and enforcement procedures and practices for its inspectors. This manual is utilized in the Transportation Safety Institute (TSI) training courses offered to Federal and State inspectors. We intend to disseminate to our State agents appropriate sections on inspection procedures and rule application.

RSPA has issued two Advance Notices of Proposed Rulemaking (ANPRM's) in FY 1987 soliciting comments on whether certain proposals for new or amended standards are needed for the safety of gas or hazardous liquid pipelines. The ANPRM's contain 20 proposals including: periodic testing to determine pipeline integrity; degradation problems on electric resistance welded pipe; the need for operators to provide more information to local communities, safety agencies, and landowners to enhance emergency awareness and response; new design requirements for certain pipelines; mandatory participation in one-call systems; and procedural specifications for operation and maintenance plans and operator training in these procedures.

in FY 1988, it is expected that we will pursue final rulemakings for a number of these proposals. We also intend to finalize rulemakings initiated in 1987 regarding damage prevention programs for hazardous liquid pipelines and the definition of gas gathering lines.

We receive advice on proposed regulatory changes from our technical advisory committees. As required by statute, the two technical pipeline safety standards committees (gas and hazardous liquids) meet to review proposed regulatory changes, additions, or deletions. Both committees meet individually on upcoming pipeline regulations and periodically have met jointly to assist me in reviewing studies and to make recommendations that affect our pipeline safety program. I believe the results produced from these meetings set an example of how important this type of advice can be to a Government program. The members of these committees are widely respected pipeline safety experts from industry, the Government, and the public sector. They have given a great deal of their time to this pipeline program. Their advice allows us to have a far more effective pipeline safety program. The benefits are worth far more than the relatively few dollars we spend bringing these people together.

The Federal/state partnership in the natural gas and hazardous liquid pipeline safety regulatory and enforcement arena has been working very well. In fact, it serves as a model for our Federal/state workshops on hazardous materials transportation.

Forty-eight jurisdictions have developed gas safety programs by adopting Federal pipeline safety regulations and enforcing them with substantially the same sanctions as those employed by the Department. These jurisdictions have assumed responsibility for inspecting intrastate pipeline operators and enforcing the pipeline safety regulations. In 1986, Massachusetts passed necessary legislation to enable it to enforce the regulations, while two States, Delaware and New Jersey, refer enforcement actions to the Department. Seven States participate in the hazardous liquid program—five States have adopted and enforce Federal safety standards applicable to intrastate pipeline facilities and two States refer enforcement actions to the Department. We have continued to use the grant monies and our staff time to encourage States to take on more responsibility for pipeline safety. Our efforts have been effective. For example, Louisiana accepted jurisdictional responsibility for municipally-owned gas systems, and Missouri and Wyoming agreed to inspect master meter and transmission pipelines, respectively, in anticipation of passing State legislation for full authority over these systems. Alabama entered into an agreement with RSPA in 1987 to inspect hazardous liquid pipelines.

The $5 million for grants being requested for the merged gas and liquid program is $500,000 more than the level of funding appropriated for FY 1987. In the gas program, twenty-seven of the jurisdictions are receiving 45-50% funding of their program costs, and thirty-two jurisdictions are receiving at least 40% of their program costs. Of the seven States participating in the hazardous liquid program, five States receive over 45% funding of their liquid program costs. I believe that maintaining assistance at this level will continue the effectiveness of the program.

RSPA distributed the $4.5 million appropriated in FY 1987 as follows: $194,000, as required by the FY 1987 Appropriations Act, was used only to support additional State inspection personnel—eight States received funding support for the hiring of seven additional inspectors; $3.2 million was distributed to provide optimum funding in each State with a relatively small program, while also providing incentive funding in each State with a more extensive program; the remaining amount was distributed according to certain basic criteria designed to assure an adequate level of safety. The criteria used by RSPA are: extent to which jurisdiction is exercised; inspector qualifications; recommended number of inspectors and recommended number of inspection person-days; third-party damage prevention program, and attendance at Federal/State meetings.

For pipeline safety research and development, the funding level requested will allow RSPA to continue certain projects and begin several new projects including one aimed at a comparison of the rules for natural gas pipeline safety and the rules for hazardous liquid. In 1985, a cooperative research program was initiated with a number of private and public organizations, greatly extending the research capabilities of RSPA. New cooperative programs underway include an American Gas Association project to develop techniques to determine if a carrier pipe is shorted to a casing and if the carrier pipe is corroding, and a Gas Research Institute initiative to establish a facility for research and evaluation of nondestructive testing methods (i.e., "smart pigs") for gas and liquid piping systems. Ongoing projects are: LNG vapor dispersion prediction and mitigation methodologies; assessment of girth weld defect tolerance methodologies; assessment of the yield/tensile ratio as a measure of toughness and ductility of steels for pipelines; stress corrosion cracking of line pipe steels; assessment of cathodic protection criteria for carrier pipe in casings; and examination of corrosion and fatigue mechanisms in ERW pipe. The completed projects are: pipeline safety testing/inspection methods study; the transport of methanol by pipeline; and the mandatory use of quality assurance programs by pipeline operators. In the latter part of FY 1987, a study on Alternative Girth Weld Defect Acceptance Criteria will be completed following cooperative research with the American Petroleum Institute fracture committee and the Welding Institute of Canada.

Finally, reports and studies legislatively mandated or at the request of Congressional representatives or Committees are summarized as follows:

(1) Grants Merger Report - This report, required by the Consolidated Omnibus Budget Reconciliation Act of 1985, was superseded by Congressional actions. Thus a letter describing the elements of the merger has been given to the Committee. It concludes that the merger of the natural gas and hazardous liquids programs (95% of grant-in-aid funds for the gas program and 5% for the liquid program) is working well.

(2) Grants Allocation Report - This report, required by the Consolidated Omnibus Budget Reconciliation Act of 1985, provides an explanation of the method by which grant-in-aid funds are allocated to participating State agencies. The report will be released shortly. A letter describing our FY 1987 grant allocation has been sent to Chairman Lehman and Congressman Coughlin.

(3) Reassessment of Mandatory Quality Assurance Program for Pipeline Operators -This report, reassessing the need for establishing mandatory quality assurance requirements for all pipeline operators under RSPA jurisdiction, supports the conclusions of a prior study which determined that mandatory quality assurance programs are not cost beneficial and would not enhance pipeline safety. This report will be released shortly.

(4) Study of the Need to Include Carbon Dioxide Pipelines within the Federal Pipeline Safety Regulations - This study requested by Congressman Sharp

concludes that it is not necessary to include carbon dioxide pipelines within the Federal pipeline safety regulations. The location of these pipelines in low density population areas and the absence of failures supports this conclusion. It is anticipated that the study will be finalized this month.

Aviation Information Management (AIM) - The AIM Program provides the data, informational resources and support services necessary for the DOT to make informed and timely decisions concerning operations of air carriers in the air transportation industry. It is the primary source of information on the economic and operational aspects of the air transportation industry. Current DOT users of the basic data and products and services of this aviation information program include: 1) the FAA (for example, safety surveillance and analysis, airport development funds allocation, airport policy development, and airway facilities requirements forecasting), and 2) the Office of the Secretary (for example, industry monitoring and international policy development including negotiation of routes, carrier selection and fares and rates, fitness determinations, and industry monitoring). Other Government agencies use the data including the Departments of Justice, Commerce, Labor, and Air Force. The airline capacity, traffic, and industry cost information is also of substantial value to non-Federal users such as aircraft manufacturers, air carriers, airports, researchers, the travel industry, and the traveling public.

In FY 1987, we conducted first-year operations under an FY 1986 realignment of the AIM program that established a cooperative effort between the Government and the private sector. This realignment provides a mechanism to offset recurrent data collection and similar operating costs with user payments from those who benefit from the aviation data, including both Federal and non-Federal sources. Under the realignment, only the AIM regulatory functions are provided for in this budget request. They include 1) identifying DOT data requirements; 2) analyzing system alternatives for data collection; 3) prescribing regulations, instructing air carriers, and enforcing necessary air carrier reporting, and 4) policy oversight and guidance of the aviation information processing activities. Also under the realignment, the AIM nonregulatory functions are now performed by resources under the TSC Working Capital Fund. This enables us to match ongoing and one-time aviation data services with user charges on a reimbursable basis. Functions include: 1) data collection, 2) data verification and processing, 3) data dissemination, and 4) special servicing.

The AIM program regulatory work continues to be focused upon reduction and modernization of air carrier reporting requirements in view of deregulation, changes in the air transportation industry, and reassessment of the Department's air transportation responsibilities under the law. Two final rules will be implemented in FY 1987 that reduce the air carriers' reporting burdens by up to 33% for Form 41 reports and as much as 50% for Passenger-Origin-Destination Survey reports. In FY 1988, we plan to finalize a rule for major modernization of traffic and market data reporting requirements. The resulting streamlined system will substantially reduce large U.S. carrier reporting burdens by replacing four current collections, including one maintained by the Immigration and Naturalization Service for DOT.

The FY 1988 budget request for AIM operation funds is $859,800. The budget request provides for AIM regulatory operations at a level comparable to FY 1987, excluding support of the Essential Air Service program which is proposed to be discontinued. AIM data collection and processing functions will operate with reimbursements in FY 1988 as in FY 1987.

Transportation Systems Center (TSC) - TSC, located in Cambridge, Massachusetts, is DOT's multimodal research, systems engineering, and applied analysis center. TSC supports the Office of the Secretary, the DOT operating Administrations, and other Federal agencies requiring assistance with transportation-related issues. The FY 1988 budget would provide 527 positions for TSC, as is budgeted for FY 1987. As in prior years, no budget authority is requested in the FY 1988 budget because TSC is funded through a Working Capital Fund and because there are no major capital acquisitions being requested. TSC's Working Capital Fund is financed through negotiated agreements with the Office of the Secretary, DOT's operating administrations, and other Governmental elements requiring TSC's capabilities. In FY 1986, TSC program level reached $75 million and is estimated to be be $79 million in FY 1987.

In keeping with the President's policy of identifying those programs within the Federal Government that might be performed by the private sector, we have recently drafted legislation for a change in the Federal status of TSC. It is important to note, however, that in light of the prohibition in the last three Appropriations Acts against planning a change in TSC's Federal status, this legislation is broadly stated and is not based on plans or studies undertaken during the period of the prohibition. In fact, the draft legislation would require the Secretary to undertake a study and develop options for the defederalization of TSC before acting. Furthermore, the language permits a range of options from establishment of a Federally Financed Research and Development Center (FFRDC) to an outright sale of TSC.

We believe that any change in TSC's status would have to be based on comprehensive planning that would consider at least the following:

o The ability of a non-federal facility to meet the ongoing and long-term needs of the Department and other agencies for research, development, analysis, and data base development and management in a manner at least as efficient as that currently provided by TSC.

o The protection of the employment interests of current TSC employees.

TSC has a distinguished record in service to the Department and other Federal agencies. Any change in TSC's status which might result from the studies contemplated under the draft legislation must recognize that record and provide that the service the Department has come to expect and rely on will continue regardless of the form TSC may ultimately take.

Office of Emergency Transportation (OET) - OET executes the statutory and administrative responsibilities of the Secretary of Transportation in the area of civil transportation emergency policy. These responsibilities include not only coordination of Departmental emergency actions but also emergency actions of non-DOT elements of the Federal transportation community. They cover the entire spectrum of potential emergency situations ranging from natural and man-made disasters such as earthquakes and labor disturbances to post nuclear attack recovery activities.

OET's major emphasis is currently directed toward three critical national security areas. First, in conjunction with other Federal agencies, OET is extensively involved in national response planning for catastrophic earthquakes and nuclear power plant incidents. Second, OET is the focal point in the development of policy, plans, and procedures for the continuation of the Department's essential functions and responsibilities during national security crisis such as a potential or actual attack upon the Nation. And third, OET is addressing DOT's part in the Nation's strategic mobility posture to assure maximum effective utilization of the civil transportation services required to meet Department of Defense deployment plans and essential civil needs.

RSPA is requesting FY 1988 operations funds in the amount of $917,500 to support these activities and research and development funds in the amount of $230,000.

Transportation Safety Institute (TSI)

TSI, located in Oklahoma City, Oklahoma, develops and conducts comprehensive training programs in behalf of 12 sponsoring Federal agencies in transportation safety and security for Federal, State and local government officials involved in all modes of transportation. The FY 88 budget request is for two positions, and the funding for these individuals. No other program dollars are requested. TSI is similar to Transportation Systems Center (TSC) in that its program activities are funded through reimbursable agreements with training sponsors. Present agreements include DOT operating administrations and other federal agencies. For example, the Federal

Highway Administration funds training of Federal motor carrier safety inspectors, the Research and Special Programs Administration - state pipeline safety inspectors, and airport security directors training — by Federal Aviation Administration (domestic) and Department of State (international).

This year, we are again requesting authority to credit funds received from non-Federal sources for hazardous materials training and funds received from the private sector for pipeline safety training to any appropriation we receive. In FY 1986, $84,743 was collected from non-Federal sources for hazardous materials training. If permitted to credit this money to our appropriation in FY 1988, it would greatly enhance our training capabilities. In FY 1987, we expect to collect approximately $75,000.

Communications and Radionavigation (Telecommunications) - RSPA is responsible for coordinating U.S. radionavigation systems; assessing the civil use of the Global Positioning System (GPS) which is currently being used for military navigation purposes and exploring alternatives to GPS for civil use. The DOT is requesting $350,000 in research and development funding for FY 1988. FY 1987 funding resulted in the publishing of the 1986 Federal Radionavigation Plan. FY 1988 funding will emphasize total integration of the GPS within the civil community.

Statistics Data and Information - RSPA has the responsibility within DOT for the development, collection, analysis, and dissemination of technological, statistical, economical, safety, and other types of transportation data. $150,000 is requested in FY 1988.

That completes my testimony in support of RSPA's FY 1988 appropriation request.

APPENDIX I

FAILURES REPORTED BY GAS SYSTEM OPERATORS
DURING CY-1986

Transmission and Gathering Systems

Cause	No. of Failures
Corrosion	11
Damage by Outside Forces	32
Construction/Material Defect	15
Other Causes	25
TOTAL	83

Distribution Systems

Cause	No. of Failures
Corrosion	3
Damage by Outside Forces	72
Construction/Operating Error	5
Accidentally Caused by Operator	7
Other Causes	49
TOTAL	136

LIQUID PIPELINE INCIDENTS REPORTED
DURING CY-1986

Cause	No. of Failures
Corrosion	51
Failed Weld	7
Incorrect Operation	13
Failed Pipe	16
Outside Force Damage	66
Malfunction of Equipment	1
Other Causes	49
TOTAL	203

APPENDIX II

SUMMARY OF GAS PIPELINE ACCIDENTS AND CASUALTIES
REPORTED FROM 1976-1986

Distribution

Report Year	Failures	Fatalities	Injuries
1976	1,036	53	319
1977	1,530	29	420
1978	1,555	20	320
1979	1,520	33	313
1980	1,467	9	269
1981	1,128	10	73
1982	1,191	20	225
1983	1,127	10	220
1984	747	26	189
1985	204	20	94
1986	136	19	86

Transmission and Gathering

Report Year	Failures	Fatalities	Injuries
1976	543	10	47
1977	466	7	30
1978	533	11	86
1979	450	12	93
1980	529	2	41
1981	495	6	6
1982	520	11	41
1983	453	2	25
1984	255	9	40
1985	127	6	12
1986	83	4	20

SUMMARY OF LIQUID PIPELINE ACCIDENTS AND CASUALTIES
REPORTED FROM 1976-1986

Report Year	Failures	Fatalities	Injuries
1976	212	5	4
1977	237	3	15
1978	256	3	10
1979	251	4	13
1980	219	3	12
1981	239	5	32
1982	200	1	6
1983	161	6	9
1984	203	0	19
1985	183	5	18
1986	203	3	32

Note: Amendment 191-5, 49 FR 18961, May 3, 1984, changed the definition of "incident" as follows: eliminated the requirement to report when taking any segment of a transmission pipeline out of service, eliminated the requirement to report if gas ignited, and increased the level of estimated property damage from $5,000 to $50,000.

APPENDIX III

U.S. DEPARTMENT OF TRANSPORTATION
OFFICE OF HAZARDOUS MATERIALS TRANSPORTATION
HAZARDOUS MATERIALS INFORMATION SYSTEMS

HAZMAT SUMMARY

(AS REPORTED BY FEBRUARY 1, 1987)

Incidents by Mode and Incident Year

MODE	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Air	122	229	293	226	160	96	67	107	116	122
Highway	14835	16450	16078	14180	8670	5675	4877	4506	4745	4546
Railway	950	1216	1234	1272	1145	839	868	1002	842	836
Water	14	49	41	34	8	9	12	9	7	7
Freight Forwarder	11	4	2	2	3	6	1	145	298	148
Other	20	16	14	29	63	1	1	7	6	12
TOTALS	15952	17964	17662	15743	10049	6626	5826	5776	6014	5671

Deaths by Mode and Incident Year

MODE	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Air	0	0	0	0	0	0	0	0	0	0
Highway	23	21	17	17	25	13	8	6	8	16
Railway	3	24	0	2	0	0	0	0	0	0
Water	0	0	0	0	0	0	0	1	0	0
Freight Forwarder	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
TOTALS	26	45	17	19	25	13	8	7	8	16

Injuries by Mode and Incident Year

MODE	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Air	9	48	6	8	7	0	3	15	4	12
Highway	555	553	691	494	394	93	117	145	195	228
Railway	254	456	228	121	222	36	68	76	53	59
Water	0	10	2	1	1	1	0	18	0	2
Freight Forwarder	0	1	0	1	0	0	0	3	1	12
Other	0	3	3	2	18	0	0	0	0	2
TOTALS	818	1071	930	627	642	130	188	257	253	315

Damages by Mode and Incident Year

MODE	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
Air	28796	6884	30462	12746	6660	26851	52575	771226	12524	57017
Highway	7988669	11348323	8924388	7376642	15010784	11577532	9252585	11134269	12683092	12489979
Railway	4259496	4619208	5569153	2952508	3652682	4138265	2559130	3352239	10273671	3072775
Water	6252	15462	111931	505408	53045	30000	76088	509849	6484	53500
Freight Forwarder	391	160	0	100	6500	35	300	14011	13918	14092
Other	9700	69287	5200	34560	70010	200	16500	975	515	3385
TOTALS	12293304	16059324	14641134	10881504	18799681	15772883	11957178	15782569	22990204	15690748

BIOGRAPHICAL SKETCHES

M. CYNTHIA DOUGLASS

Cindy Douglass was appointed the Administrator of the Research and Special Programs Administration at the U.S. Department of Transportation in 1984. Before joining DOT Ms. Douglass was with the Senate Commerce Committee and dealt with issues on motor carrier economic and safety policy, pipeline safety, economic policy for oil and coal slurry pipelines, and motor vehicle and highway safety policy.

The Research and Special Programs Administration conducts research and development programs for all modes of transportation; regulates the transportation of hazardous materials and pipeline transportation of gas and liquids, and conducts emergency transportation preparedness and safety training programs.

LOUIS W. ROBERTS

Louis W. Roberts is Director of the Transportation Systems Center (TSC), the U.S. Department of Transportation's research and analysis facility for air, highway, rail, pipeline, and marine transportation. He was named to this office by the Research and Special Programs Administrator in February 1985.

Dr. Roberts joined TSC when it opened in 1970. In his 15 years at TSC, Dr. Roberts has held most of its top managerial positions including that of Deputy Director; Director of the Office of Technology, Energy and Environment; Director of the Office of Operations Engineering; Director of the Office of Data Systems; and Director of the Office of Administration. In 1984 he received the Presidential Rank Meritorious Executive Award. Before joining TSC, from 1967 to 1970, he was chief of the Optics and Microwave Laboratory at the Electronics Research Center of the National Aeronautics and Space Administration (NASA). Prior to joining NASA, he had extensive high-tech and R&D experience throughout the 1950's and 1960's in positions at Massachusetts Institute of Technology (M.I.T.), Sylvania Electric, Bomac Laboratories, and as founder and president of Microwave Associates, located in Burlington, Massachusetts.

Dr. Roberts was graduated from Fisk University, received an M.S. degree from the University of Michigan, and completed additional studies at the University of Michigan and M.I.T. In 1985, he received an honorary Doctor of Laws degree from Fisk University. Before turning to business and government, he was a professor of physics and mathematics at St. Augustine's College in Raleigh, North Carolina and Howard University in Washington, DC.

Dr. Roberts resides with his wife in Wakefield, Massachusetts. They have two sons.

LLOYD E. MILBURN

Mr. Milburn joined the U.S. Department of Transportation (DOT) in July 1975 from the Department of the Army where he had served in a variety of military assignments. Among his military jobs were commander of major transportation operating units, senior staff positions in the Department of Army, Headquarters, and the Supreme Allied Powers Europe, and Instructor at the U.S. Army Transportation School.

Since joining DOT, Mr. Milburn was a staff officer in the Office of Transportation Security and the Office of Emergency Transportation.

Mr. Milburn was appointed to his current position as Director of Emergency Transportation in December 1985. In this capacity he is responsible for managing the emergency preparedness programs of DOT. These include response planning for continuity of government and civil transportation resource management activities in national defense and national and regional emergencies.

A native of Opelousas, Louisiana, he holds a BS Degree from Southern University in Agriculture. He is also a graduate of the U.S. Army Command and General Staff College, and the Defense Traffic Management Course. His advance studies include Computer Science at William and Mary, Transportation and Distribution Management at American University, and International Relations at Boston University.

RICHARD L. BEAM

Mr. Beam was appointed Director, Office of Pipeline Safety in January 1987. Prior to that, he served as Associate Director, Pipeline Safety Regulation beginning in August 1982.

Mr. Beam joined the Department of Transportation in 1968 as Director, Office of Telecommunications, serving as the Department's principal on all technical and policy matters relating to the development and diverse uses of telecommunications as a principal supporting system for all modes of transportation.

Prior to joining DOT, Beam spent nineteen years with the Hazeltine Corporation. From 1962 to 1968, he served as President of Hazeltine, responsible for the management of the corporation and its subsidiary companies.

A native of State College, Pennsylvania, Beam graduated with a BS degree from Pennsylvania State University in 1939. Served in the U.S. Army 1941-1945 and receiving electronics training at Harvard and MIT, 1942-43.

ALAN I. ROBERTS

ALAN I. ROBERTS is the Director, Office of Hazardous Materials Transportation, of the Department of Transportation's Research and Special Programs Administration (RSPA) in Washington, D. C. He is a graduate of Penn State and spent four years in the Air Force. Prior to his employment by the Department of Transportation in 1967, Mr. Roberts served as a Safety Inspector with the Interstate Commerce Commission and was Vice President of a motor carrier in Pennsylvania. Except for a short tour of duty with the National Transportation Safety Board, Mr. Roberts has been involved primarily in work related to hazardous materials transportation since 1967. He became Director of the Office of Hazardous Materials Operations in July 1975 and RSPA's Office of Hazardous Materials Transportation following a reorganization in 1985. He serves as the United States representative to the United Nations Committee of Experts on the Transport of Dangerous Goods and has been Chairman of the Committee since 1980.

ROBIN A. CALDWELL

Mr. Caldwell has directed the DOT's aviation economic information program since 1985. The program provides a central source of financial and statistical information about the results of air carrier operations as well as basic air passenger demand data. These facts are needed for FAA and OST program purposes, and also serve the needs of other Federal agencies and non-Federal users. The program includes the regulatory functions of data requirements analysis, systems planning and design, rulemaking and enforcement. In 1986, he led the changeover of the program's data collection, data processing and data dissemination activities to a user pay basis.

Mr. Caldwell previously held aviation information management positions at the Civil Aeronautics Board for 19 years. He was Chief, Information Management Division from 1979 through CAB's 1984 sunset. He led CAB's major reduction and realignment of its aviation data collections in view of the industry's phased deregulation. Before that he was Assistant Director, ADP Planning for CAB's Bureau of Accounts and Statistics. From 1966 to 1975 Mr. Caldwell was Chief of the Data Processing Division where he managed CAB's computer facilities and resources.

Prior to joining CAB Mr. Caldwell was a Systems Engineer with the IBM Corporation, a Management Analyst with the National Institutes of Health, and a Production Planner with the Minneapolis-Honeywell Co.

Mr. Caldwell is a 1961 graduate of the University of Maryland with a B.S. in Education for Industry.

REMARKS BY SENATOR COCHRAN

Senator LAUTENBERG. Thank you. That was an excellent wrapup. It was a good statement, certainly, and there is a lot of ground to cover.

I did want to acknowledge the presence of my colleague from Mississippi and to ask if you had an opening statement, Senator Cochran, that you wanted to present at this time.

I would also ask what your agenda is. We will try to accommodate. I was going to go through 10-minute cycles, which would take otherwise about 20 minutes to get to you. Now, is there something that you would like to put in the record or state at this juncture?

Senator COCHRAN. Mr. Chairman, I appreciate your giving us an opportunity to make an opening statement. Actually, I do have questions of Ms. Douglass on the investigation that has been conducted by her office or the southern regional office into some accidents that have occurred in the state of Mississippi. So I would like an opportunity to explore that, but I will be happy to defer to others, wait my turn, and follow the usual course of procedure.

SAFETY RECORD OF HAZARDOUS MATERIALS TRANSPORTATION

Senator LAUTENBERG. Our colleague is always a gentleman, and we appreciate the fact that you will have some time to stay with us. I know that you have questions about Mississippi, and we all have questions about problems that have occurred, especially in the pipeline area.

Estimates are that between 10 and 20 percent of the millions of tons of goods shipped each year are classified now as hazardous materials. It is evident, therefore, that we must have in place sound regulatory controls over these shipments. Also, we have to enforce those controls in a manner that leaves no doubt about our intention to assure that the public is properly protected.

This is especially critical in states like mine and others where there is a busy transportation network. The statistics that we see on deaths, injuries and damages associated with accidents involving hazardous materials are a stark reminder that all of us who are responsible for protecting the public have to do even more than we have done. In New Jersey there were three deaths last year, and that is three too many as far as I am concerned.

Now, you state that the safety records for the transportation of hazardous materials has been very good and that you are committed to insuring that this excellent record continues. Yet, you said that last year there were accidents that resulted in 16 deaths and 315 injuries associated with the transportation of hazardous materials.

These represent twice as many deaths as there were in each of the 3 preceding years and a substantial increase in the number of injuries. One of the things we need to establish right off, therefore, is how you make the judgment about the excellence of the safety record.

What are the criteria you use for making those judgments, Ms. Douglass?

Ms. DOUGLASS. Well, there are how many shipments a day or a year, Al?

Mr. A. ROBERTS. We estimate there are approximately 200 million shipments a year of hazardous materials.

Ms. DOUGLASS. If you look at other safety modes, you will find that—I do not want there to be any more accidents or any more deaths or injuries than we have to have, but these are very hazardous materials, and they are being transported on the highways and by rail. I think that we do have a very good record.

Now, we do want to improve our record, but I doubt that we will ever get down to zero deaths every year.

HAZARDOUS MATERIALS ACCIDENTS

Senator LAUTENBERG. Is the reverse of that the potential that we could have a major disaster on our hands? I think that unless we continue to improve—and it is not just the proportion of accidents to movements of material.

First of all, I think we have to start with the basic number of deaths and injuries. If it happens in your family, your community, your state, it is a major disaster. More than one in a family is a major disaster, and I think that what we have to do is continue to focus. We want to make sure that the resource is there, that the mission is there in your department, in any department of the government that has responsibility for the safety of our citizens. That is where we start as a country.

What are the most common kinds of hazardous materials accidents?

Ms. DOUGLASS. I will ask Al to expand on this, but I really think it is the gasoline tanker.

Senator LAUTENBERG. Now he is left with either confirming or challenging you. Go ahead.

Mr. A. ROBERTS. That is correct. Historically, the transportation of gasoline has accounted for well more than one-half of all the fatalities of hazardous materials.

Senator LAUTENBERG. That is by truck?

Mr. A. ROBERTS. Yes; for example, last year, and I do not have the exact date on this, but we had 16 fatalities in hazardous materials transportation, and all of those fatalities related to transportation by tank truck.

Senator LAUTENBERG. The data for 1986, I think, suggests an upward trend. Is that true?

Mr. A. ROBERTS. Well, if you look at it on a 1- or 2-year comparison, Senator, that is correct; but I believe if you look at it from the standpoint of 10 years, this is not out of the average. The fatality rate has ranged from, I think, a low of 8 to a high of 30-some fatalities in 1 year, rail and highway. I would say the running average, and we can provide it for the record, would be approximately somewhere around 15.

HAZARDOUS MATERIALS REGISTRATION

Senator LAUTENBERG. We have, though, opportunities to do better with technology, with accumulation of data, with information dissemination, and these are all the things that we can do. As we grow as a society and these materials are necessary for our living, our lives, then I would hope that we can continue to bring that average down. It is small, but when it happens to any one of us, why it becomes a major thing.

REGISTRATION PROGRAM

The Hazardous Materials Transportation Act of 1974 authorized the Secretary to require registration of shippers, carriers and container manufacturers. The 1980 GAO report recommended a registration program to identify the number and locations of carriers, shippers and container manufacturers involved in the transportation of hazardous materials. The Safety Task Force agreed with GAO on the value of this kind of information but recommended a pilot study of a limited registration program.

Now, you are requesting $220,000 to implement this program; correct? Why has the Department waited so long to address this problem?

Mr. A. ROBERTS. First, I should mention, Senator, we currently have under way in response to the Secretary's Safety Task Force Report a study on this subject which should be completed and presented to the Administrator in semifinal form sometime around the end of this month.

I think that when you look at the whole spectrum of what is defined as hazardous materials, you may have a better understanding of the situation, especially with the congressional action in recent years applying the EPA statutory provisions to the Hazardous Materials Transportation Act; that is, hazardous waste and hazardous substances, clean air and all materials defined under a number of different statutory mandates are now hazardous materials.

For example, we estimate there are probably more than 200,000 farmers, agriculture operators, currently under DOT jurisdiction, federal jurisdiction and intrastate and interstate commerce transporting hazardous materials, the three largest product areas being ammonium nitrate fertilizer, anhydrous ammonia and pesticides.

Registering all these farmers, identifying them, keeping records, engaging in enforcement activities relative to their failure to report or change of address is at one end.

The other areas that just quickly I could identify are plumbers transporting welding gases; refrigeration service companies transporting refrigerant gases; swimming pool companies transporting calcium hypochlorite for chlorination of swimming pools. These are all regulated hazardous materials under the Department's rules.

Sorting this out and saying that all these people, several hundred thousands of entities, would have to register could create some administrative difficulty. The real question we have to ask ourselves is, What would be the final benefit?

Senator LAUTENBERG. It is quite a universe out there. The question that jumps out at me is it seems we know that there are problems there. It just seems to have taken a long time. You are saying that the report is going to be at the Administrator's desk at the end of April. Is that what you are saying?

Mr. A. ROBERTS. Correct.

Senator LAUTENBERG. Obviously, we would like a copy of that as soon as it is ready.

PIPELINE TRANSPORTATION OF PCB'S

I want to talk for a moment about Texas Eastern. As you know, we have a vital interest in this in New Jersey, and I am not sure what you can do for us here.

Several weeks ago the Superfund and Environmental Oversight Subcommittee, which I chair, held a hearing on the pipeline safety issue. Texas Eastern is dumping PCB fluids in pits next to the pipelines in 12 states. EPA's oversight here is sorely lacking.

As the agency indicated, this may be a problem affecting a number of other pipelines. I realize that you do not have direct jurisdiction over this, but I would like to ask a few questions and see if you can help us through this.

Would your inspection of the pipelines reveal this kind of dumping in the presence of such pits?

Ms. DOUGLASS. No; it would not. First of all, our responsibility under the act goes to maintaining the integrity of the pipeline itself and the valves, and it also goes to the operation of the pipeline company as it affects that pipeline.

Now, when our inspectors inspect, their training is all in regard to our regulations and in regard to the integrity of the pipeline. So when they go out to inspect, they go out to inspect for that specific purpose. Now, this is a general statement.

The second thing is that my understanding is that the PCB's were dumped a number of years ago. Was it 10, or do you know, Dick?

Mr. BEAM. It would have been prior to 1981.

Ms. DOUGLASS. It is not going on right now. The problem is it was done a number of years ago, and now it is coming to light and they are trying to decide what to do.

Senator LAUTENBERG. Well, it continued for some time after it was supposed to stop. One company was fined over six figures, as I remember, in Arizona, and that was not for having met the requirements, obviously. It was for violating them. Even after the PCB's were prohibited from manufacture, these people continued to draw down their inventory of this material.

I wonder, since you are out there, and I forgot the number you used for the number of miles you inspect—it is enormous—whether we could modify the inspection procedures. You are there. Your people are there. They are looking at some fairly detailed stuff. You talk about the integrity of the valves working, the structure, et cetera, rusting, I guess, if that takes place or whatever the elements do to a pipeline.

Could we get a modification and maybe reduce the redundancy of looking for things by other agencies, other departments that your people could take a look at?

Ms. DOUGLASS. If you are talking about the PCB issue in particular, I do not think that people are continuing to dump.

Senator LAUTENBERG. Right. They are not continuing to use that, but after all we are transporting materials that have some chemical or structure that can produce fairly serious problems. It is not just escaping gas. It is what does it do if the material gets out into the community and water supplies and things of that nature.

What we are looking for is some way to improve the efficiency, not just in your Department, of our enforcement and inspection routine.

Ms. DOUGLASS. Well, depending on what the particular job would be, two things come to mind. One is that our pipeline inspectors are engineers by training, and that is essentially required. In terms of being a pipeline inspector, it is necessary to be an engineer.

They are not chemists and they would certainly not be able to recognize certain chemicals. They would not be familiar with the liquid that is in the pipe. Recognizing what it is, is a problem.

Senator LAUTENBERG. Maybe we can get back to talk about that for a moment. My time is up.

Senator D'Amato.

PIPELINE INSPECTOR QUALIFICATIONS

Senator D'AMATO. Mr. Chairman, I am wondering, do we have federal inspectors that have qualifications, and what are those qualifications?

Ms. DOUGLASS. The federal inspectors do have qualifications, yes. Al or Dick can expand on it, but there are certain basic criteria they have to meet before they are hired, and once they are hired they have to attend training at the Transportation Safety Institute in Oklahoma City. There are about eight courses that we require our inspectors to attend in Oklahoma City.

Senator D'AMATO. How many federal inspectors do we have?

Ms. DOUGLASS. We have 20.

Senator D'AMATO. Twenty?

Ms. DOUGLASS. We have 20 pipeline inspectors.

Senator D'AMATO. For the whole country?

Ms. DOUGLASS. Yes; the way the program works, we have federal inspectors, and then we have a grants-in-aid program. The purpose of the grants-in-aid program is to form a federal/state partnership in the pipeline safety area.

Senator D'AMATO. For example, New York State gets $322,000. That is what goes to the state under the grants program.

I think the question comes up as to the adequacy of the program and whether or not, and I would like to ask your Director of Pipeline Safety, if you really think we are comprehensive with a total of 20 federal inspectors, and I would like to know what the interrelationship is between the federal inspectors and the state inspectors. Do they supervise them? Do they report to them? How does that work? Is that adequate?

I will put you on the spot with that one. Now, you have a certain role that you have to play as the pipeline director. Are you telling me with 20 inspectors you think that this is adequate?

Mr. BEAM. Yes, Senator, we do. Based on the criteria that we have established.

Senator D'AMATO. OMB has gotten to you, too. [Laughter.]

Twenty people nationally you think is adequate?

Mr. BEAM. Let me explain, sir, if I may, that we have this federal/state relationship, and the state inspection forces total right now about 260; so that our 20 oversee those elements which are not covered by the state inspectors.

FEDERAL-STATE PIPELINE SAFETY RELATIONSHIP

Senator D'AMATO. Now, would you explain to me the correlation between the state inspectors and the federal? Do they report to them? Is there some kind of integrated program? How does that work?

Mr. BEAM. Under the Natural Gas and Hazardous Liquid Acts, states can certify that they have adopted the federal regulations and can take over jurisdiction under that certification for intrastate pipelines.

Senator D'AMATO. So in New York, for example——

Mr. BEAM. The Public Service Commission in New York has jurisdiction of the intrastate natural gas pipelines, yes, sir.

Senator D'AMATO. So all the inspections then are conducted by the state inspectors? Is that what you are saying?

Mr. BEAM. That is correct with respect to intrastate pipelines.

Senator D'AMATO. So actually, those 20 are not inspecting any of the pipelines in New York; correct?

Mr. BEAM. What we are inspecting in New York is the interstate pipelines.

Senator D'AMATO. The interstate?

Mr. BEAM. The interstate, yes.

Senator D'AMATO. OK, and we have 20 nationwide, so is this fellow going to go up there, and inspect that big pipeline that comes from Linden, NJ?

Mr. BEAM. Yes, sir; we have an Eastern Region Office based in Washington, and the staff of that——

Senator D'AMATO. How many people do we have there?

Mr. BEAM. Three inspectors.

Senator D'AMATO. Three inspectors. They must be pretty busy.

Mr. BEAM. They are.

ADEQUACY OF INSPECTION FORCE

Senator D'AMATO. I am wondering about the adequacy of three inspectors. I know my colleague from Mississippi has some very specific questions, but it does raise a question immediately in one's mind as to the adequacy if you have three inspectors for the northeast region and they do all of the interstate. I just wonder about that.

I am going to yield to Senator Cochran, and maybe we can talk about this another time because he has some very specific questions.

Senator Cochran: Go ahead and respond to that because I do have a similar question about the southeast.

Ms. DOUGLASS. OK. I appreciate the chance to respond to that. In terms of our federal responsibility as of right now, we have broken down all of the pipelines that we are responsible for inspecting into pipeline inspection units, and we figure that we have about 1,208 inspection units.

We have defined a comprehensive inspection as involving a 1½-day inspection. We have put a day of travel into that, obviously, so we figure that——

Senator D'AMATO. Does he carry a toolbox with him? Does he have equipment? Does he do this with his eyes? I do not mean to be too facetious, now, but how technical is this? Is he an engineer? Are they all engineers?

Ms. DOUGLASS. Yes; they are all engineers.

Senator D'AMATO. They are engineers with degrees; correct?

Ms. DOUGLASS. Yes.

Senator D'AMATO. Metallurgy? These pipes go under the water, some of them, do they not?

Mr. BEAM. Our federal inspectors are all graduate engineers.

Senator D'AMATO. They are all graduate engineers, these three?

Mr. BEAM. Yes, sir.

Senator D'AMATO. OK, and when they go out to inspect, there are 1,200 units. How do they inspect? I would like to know. What do they do?

Senator LAUTENBERG. Very quickly.

Senator D'AMATO. Very quickly.

Ms. DOUGLASS. First, they go to the pipeline office that is responsible for that section. They look at all of the records the company is required to keep. They look at their own written procedures on how they intend to comply with our regulations. They review those very carefully. That takes about a day or part of a day.

Then they go out into the field and take a look, do some spotchecking at different locations, depending on what they have found in the office and in leak surveys and other information they have found in the office.

As I said, with the number of inspectors that we have on board, we can inspect and do what we call a comprehensive inspection once every 2½ years of every pipeline inspection unit.

Now, pipeline companies are broken down into units, so a larger company may have five or nine units. So we will be inspecting almost every company in this country at least once a year, usually several times a year, but we will not be able to comprehensively inspect that entire company. Every 2½ years, every section (unit) of that company will have been inspected.

Now, if we wanted to increase that to once every 2 years rather than 2½, we would need to add four inspectors. If we wanted to increase that to inspecting every unit once every year, we would need to add about 19 inspectors and some secretaries. That would be like 23 or 24 people. That has a cost to it, but we feel that once every 2½ years is good and is adequate.

Senator D'AMATO. Mr. Chairman, my time has expired, but I think that just by the very nature of what we are talking about, the critical nature, I think that really we should examine this issue as it relates to the adequacy of the numbers. It is not a question of whether or not we want to increase the size of the agency. It is what is really required, what is necessary.

What is that? I do not know, but I think that is a pretty important question to get to in terms of seeing to it that there is an adequate inspections. I hope those inspections meet the needs.

I thank you for the time, Mr. Chairman.

PIPELINE INSPECTION UNITS

Senator LAUTENBERG. Just one second, if I might, before the Senator from Mississippi takes the floor.

You said there were three inspectors in a northeast region based in Washington. How many miles of interstate pipeline do they cover, do you know?

Mr. BEAM. I would have to provide that for the record.

[The information follows:]

The Office of Pipeline Safety's Eastern Region has an estimated 24,000 miles of interstate gas transmission and 7,000 miles of interstate liquid pipelines.

Senator LAUTENBERG. You do not know. Do you have people assigned to that? Someone must know.

Ms. DOUGLASS. I can tell you how many inspection units they cover.

Senator LAUTENBERG. How many?

Ms. DOUGLASS. There are 15 states in the eastern region, and they cover 127 inspection units.

Senator LAUTENBERG. How do you measure a unit?

Mr. BEAM. An inspection unit, Mr. Chairman, is an element of a pipeline company which is controlled from a particular focal point. All the records and the management of that unit is from a single point.

Senator D'AMATO. That is why I think we have to have another hearing.

Senator LAUTENBERG. The Senator from Mississippi.

MISSISSIPPI PIPELINE ACCIDENTS

Senator COCHRAN. Thank you, Mr. Chairman.

Ms. Douglass, let me thank you for responding to my request for a review and investigation of the accidents that had occurred in Petal, MS, at the liquefied petroleum gas facilities there.

To summarize and refresh the memory of witnesses who are here today, last December there was an explosion at this facility. Luckily, no one was hurt, but in July of last year there had been an explosion and 14 people were hurt, some very seriously. Twelve years earlier in 1974 there had been a huge explosion at this same facility. Some estimated that half the businesses and homes in the town of Petal were damaged as a result of that 1974 explosion.

What has happened since then is that property values have gone down. People are worried about the value of their property. They wonder whether they are sitting on a time bomb that is going to go off again and do more damage or kill people.

There is a lot of concern in this area about whether or not the underground storage of liquefied petroleum gas is a threat to the people who live in this region. There are aboveground storage facilities. There are pipelines coming into this terminal area. There are railroad spurs. There is a very substantial amount of activity at this area.

When we heard about the fact that no one was claiming jurisidiction or responsibility for any kind of safety regulations or inspections or such as that, I wrote the Secretary of Energy and inquired about whether he had any agency under his jurisdiction with responsibility. He, in effect, referred me to the Department of Transportation and ultimately to your office.

I appreciate the fact that you have conducted an investigation and have furnished us with a copy of a report detailing the findings and recommendations about defining the responsibility for inspection and regulation over this facility.

As I understand the conclusions, however, there is no clear definition right now of ultimate responsibility for inspection or safety at this site. Could you tell us why there is no such clear definition of responsibility?

Ms. DOUGLASS. First of all, the report we provided is a draft. It just came in to me last night, and I have not finalized it because I do not understand exactly the answer to that question.

Generally the way that the act works, a state can take on responsibility for intrastate pipelines if they want to. I mean, that is good and we encourage it. Most of the states have taken on responsibility for intrastate pipelines. They adopt our regulations, and for intrastate purposes they can adopt more stringent regulations if they feel that those are needed. We have encouraged that.

Mississippi has taken on that responsibility for intrastate pipelines. With regard to this particular accident, we have been talking with the state about this particular tank farm.

Would it be fair to call it that?

Mr. BEAM. It is a storage cavern underground.

Ms. DOUGLASS. The state has not determined whether or not within that facility they have specific responsibility for certain lines.

INTERSTATE AND INTRASTATE JURISDICTION

Senator COCHRAN. As I understand it, and I do not mean to interrupt you before you have completed your response, but there are interstate pipelines coming into the area and intrastate lines as well.

Now, what bothers me is that the federal government is looking to the state and saying you have responsibility over the intrastate part. We assume responsibility for an inspection every 2½ years or thereabout over the interstate part, but then there are underground storage caverns and salt domes.

What about jurisidiction there? How can you tell once the gas is in there whether it is interstate or intrastate?

It seems to me that we need to get together with the federal and state agencies and try to resolve this at the earliest possible time and get some standards, some regulations in place that will help insure that these people are protected there.

Ms. DOUGLASS. I do think that in 99 percent of the cases the jurisdictional aspects are very clearcut. This is a very difficult situation, and there is apparently confusion about it.

Mr. BEAM. This is an area that we have recommended we do get together with the various agencies in the state of Mississippi and try to sort this thing out.

Senator COCHRAN. Why don't we do that? This is a part of this draft report that I have. Someone observed that it may be that we should get the State Fire Marshal's Office together with the Public Service Commission, and another state agency was mentioned as well. I think the Mississippi Oil and Gas Board has a liquefied petroleum division that may have some jurisdiction in the circumstances.

Let us meet with representatives who are engineers, technically capable from the southern region, and let us decide who is going to assert jurisdiction, who is responsible, and do something to help guarantee that this kind of thing is not likely to happen in the future.

The assumption is, since there have been three very serious explosions in a period of 12 years, that this could very well happen again, particularly if nothing changes, if we just continue to wander around and say, well, we do not know.

We have a lot of people who have a lot of expertise but nobody is really assuming the responsibility.

Ms. DOUGLASS. I agree with you, and we will be glad to work on that and be a participant in it. If the state would like to take the lead, we will be glad to participate. If they would prefer that we take the lead, we would be glad to do down and head or chair a meeting or whatever. We will be glad to do this, because I do want to get this cleared up.

Senator COCHRAN. I think it is a good idea to get a task force together. Let us just form a special task force for safety and get it together. I am sure the local citizens in the area will support this and cooperate. Local officials surely will.

I will do this. I will contact the mayor of Petal, MS. We will ask that he make available space there, and I will schedule a meeting and invite everybody.

Ms. DOUGLASS. OK.

Senator COCHRAN. Let us get started to take corrective action.

Ms. DOUGLASS. We will be there, and we will be glad to help.

Senator COCHRAN. Thank you very much for your cooperation. I appreciate your assistance.

Thank you, Mr. Chairman.

STATE PIPELINE INSPECTOR QUALIFICATIONS

Senator LAUTENBERG. Thanks very much, Senator Cochran.

I have a few other things that I wanted to ask you about.

What are the qualifications for state inspectors of pipelines?

Ms. DOUGLASS. First of all, you should know that in our Pipeline Safety Reauthorization bill which we have sent up to the Hill, we are requesting that you amend the acts to give us authority to set standards for state pipeline inspectors.

Right now, we use the grants program. We set standards, and we use the grants program as an incentive to try to encourage states to have more qualified inspectors. What we would like to do is be able to withhold funds from a state that does not have qualified inspectors. We would like to be able to set qualification standards and essentially require a state that is receiving money under the act to meet the standards.

Senator LAUTENBERG. Even with their own work force?

Ms. DOUGLASS. Yes. By the way, the National Association of Pipeline Safety Representatives at the state level support that, and so does the industry.

Senator LAUTENBERG. So it is fair to conclude that you are not assured, and therefore I would conclude that I ought not to be be assured, that there are qualified people doing these jobs. We are not saying that they are not, but we are also saying, however, that we do not know.

Ms. DOUGLASS. I can say that we do know the state pipeline inspectors very well, and most of them are very well qualified.

Senator LAUTENBERG. Using what as a criteria, an engineering degree?

Ms. DOUGLASS. Beg pardon?

Senator LAUTENBERG. Are you using an engineering degree as a qualification? How do you measure that?

Ms. DOUGLASS. I believe I have a list of the criteria right here, but the engineering degree would be one thing.

Senator LAUTENBERG. So you have some kind of a checkoff that you use in evaluating them?

Ms. DOUGLASS. Yes; training at the Transportation Safety Institute would be another requirement.

Senator LAUTENBERG. But the fact that many of these people meet that test does not mean that there is an adequate skills level throughout the system within each of the states that have pipelines and have potential problems with them?

Ms. DOUGLASS. I think I understand the question.

Dick.

Mr. BEAM. I think there is room for improvement, Mr. Chairman, and that is why we have asked for the legislative authority.

TRANSPORTATION OF GASOLINE

Senator LAUTENBERG. OK. I wanted to just get back to something that you said about the number of accidents resulting from the transportation of gasoline.

Do you think that we ought to be looking at more specific regulation of that kind of transport? Have you come to any conclusions? I guess the NTSB probably does much of that review or the Federal Bureau of Motor Carrier Safety.

Do you know if they are looking at this information that your agency gathers with the prospect, perhaps, of different kind of rules or regulations that might reduce that potential?

I can tell you. It makes me awful nervous when I see, forgetting about whether it is gasoline specifically, just some flammable materials, to see these trucks hurtling along often at speeds that do not look like their vehicles are being safely operated. We know that we have a major problem in this country with injuries and fatalities resulting from truck transport.

Do you have any conclusions or observations that you would care to give in that area?

Mr. A. ROBERTS. Well, we certainly have a position on this, Senator. We are currently dealing with the subject of improvement of tank truck integrity in the rulemaking under our Docket HM183.

Senator LAUTENBERG. That is the structure of the materials used?

Mr. A. ROBERTS. Structure, maintenance, repair, and design.

Senator LAUTENBERG. Inspection?

Mr. A. ROBERTS. It is a comprehensive rulemaking proceeding.

We have held several public hearings based on the comments we have received which were rather strong in opposition to certain aspects of our proposal from regulated industry.

We held a series of four public meetings within the last week where we took the comments we received and went back to the industry and asked them to provide further clarification or justification of their point of view.

A number of these proposals pertain to the tank truck used to transport gasoline; some of them dealing with the structural integrity of the tank truck; part of it a retrofit of the dome closures, to reinforce them or give them a higher degree of integrity against overturn discharges; and quite a bit of the rulemaking, as I said, deals with how you repair, inspect, maintain and retest cargo tanks.

We have been working on this project for various forms of research development and supporting evidence for many years now, and we hope to bring this rulemaking to a close in the not-too-distant future.

Senator LAUTENBERG. The advance notice for the proposed rulemaking for this I think was issued in 1982.

Mr. A. ROBERTS. That is correct.

Senator LAUTENBERG. It sounds like a long time to get to where we are now. Do you agree?

Mr. A. ROBERTS. Yes; we certainly would like to have moved on it quicker. As we worked on it after the advance notice, and we did involve ourselves in some public proceedings at that time, we kept adding to it.

As a result of the advance notice and the questions we raised there relative to our decision to go to a more comprehensive rulemaking, its development time has been extended. In fact, we have been receiving the research reports giving us support for the rulemaking since 1982.

You always have to make a decision in the regulatory process as to whether you want to do incremental rulemaking, in other words piecemeal, or engage in a comprehensive change to the system. If you are going to change the tank truck system in this country, which is a major distribution component of our society, you have to do a pretty well articulated rulemaking, and you do not want to make little picky changes as you go along. So we decided to go the comprehensive route.

Senator LAUTENBERG. Yes; that debate is always, unfortunately, appropriate, but at some point the urgency—I listened very carefully to what you said, and I thought it was certainly noteworthy, about where the fatalities, the major accidents, are taking place. That kind of transportation system is being use in ever-increasing numbers as the demand for gasoline continues to grow.

Let me ask a question about the hazardous materials enforcement inspection. In response to a question I asked last year, you responded for the record that the federal inspection force for hazardous materials amounted to 1,237 inspectors for fiscal year 1987.

Is that the number that you confirm now?

Ms. DOUGLASS. Did you say 1,287?

Senator LAUTENBERG. Twelve hundred thirty-seven.

Ms. DOUGLASS. Twelve hundred thirty-seven. That would obviously include all the different modes, the Bureau of Motor Carrier Safety and FAA.

Senator LAUTENBERG. Now, 11 or 12 of those are in your agency in particular; is that correct?

Mr. A. ROBERTS. We have 12 authorized positions in our enforcement division.

Senator LAUTENBERG. Are they filled?

Mr. A. ROBERTS. We presently have eight inspectors on board, one clerical, and we have two people in active recruitment whom we are planning to bring on board in the near future, and one more that we contemplate hiring within the next couple of months.

Senator LAUTENBERG. Now, that was your objective for the current fiscal year, the full complement, 12. Why do we have that? Did you need the 12? Is the number 11 or 12? I am not sure.

Mr. A. ROBERTS. Twelve total staffing.

Senator LAUTENBERG. Including the support staff.

Mr. A. ROBERTS. One secretary.

Senator LAUTENBERG. Yes; and you are eight and one? Is that what you said?

Mr. A. ROBERTS. Right.

Senator LAUTENBERG. Do you think you need the other three?

Mr. A. ROBERTS. Yes, sir.

Senator LAUTENBERG. Then I have to ask you, why do you not have them? You had the money.

Mr. A. ROBERTS. We have had full authority to hire them. We have been doing a lot of interviewing. The division chief presented his case to me, that he had two very highly qualified people, one going for a Ph.D. in chemistry, and one is in the Air Force, presently working with hazardous cargo at Dover Air Force Base. One is an employee of the Coast Guard, and he cannot get out of the Coast Guard for about another month.

We consider both of these candidates very highly qualified to engage in our enforcement program, and I instructed the division chief to get them on board as soon as they were available. We did not want to just run out and hire somebody for the sake of hiring somebody. We wanted to get quality people.

Senator LAUTENBERG. Right. Is there a work force out there from which you can draw, or is there not?

Mr. A. ROBERTS. We have received applications for these positions. I should not say a lot, but we have received applications for these positions. I consider these two particular candidates to be extremely well qualified. We have worked with one of them extensively.

INSPECTION AND ENFORCEMENT STAFFING

Senator LAUTENBERG. Should the qualifications be reviewed? I assume that these positions are important. We are talking about large percentage numbers, small actual numbers.

If so, and you are not able to get people and you have to wait for this one to leave the Coast Guard and that one to finish his Ph.D., you could be waiting a long time. Are the qualifications that you are looking for, the specs, too high for the job that needs to be done?

Now, I do not know what is involved in these inspections, but I would imagine it could be routinized to a point where much of it is data gathering and not as much decisionmaking done at that level.

Ms. DOUGLASS. I think we got the authority to hire these positions in November with the passage of the appropriations act. The next thing that you do after that, and we did immediately—we have worked so hard to fill these positions—but the next thing you do is draft a position description, and go to OPM and get that approved, and then you have to advertise for the position for *x* period of time.

So, we have been moving. We identified some people that I think we felt were extremely well qualified and which we wanted, but we did feel that we would have to wait another month or 2 months. This was a month ago.

Senator LAUTENBERG. What job level are these? What is the salary level?

Mr. A. ROBERTS. They will be GS–12's.

Senator LAUTENBERG. Which is what?

Mr. A. ROBERTS. In the mid-$30,000 range.

Senator LAUTENBERG. Is that competitive in the marketplace? I would think so.

Mr. A. ROBERTS. That is hard to say.

Senator LAUTENBERG. I do not think it is great.

Mr. A. ROBERTS. If I may, though, I would like to clarify one point. I was not waiting for the gentleman to get his Ph.D. He is a senior sergeant in the Air Force, very qualified. He has his master's degree in chemistry. He seems very qualified. We know his work up there inspecting cargo.

There are good investigators and lousy investigators, and we were trying to get some good investigators based on some indepth experience inspecting cargo. We feel that for this particular type of activity, we were competitive in terms of the grade structure.

Senator LAUTENBERG. I would think so.

Mr. A. ROBERTS. Retired enlisted personnel in particular who have had considerable experience in explosives investigation and ordnance disposal who would know our rules already in terms of how to pack and ship explosives would be very handy in carrying out our program.

Senator LAUTENBERG. In 1979, there was an inspection force of 1,600 people in DOT agencies. In 1984 the number had dropped drastically to 961, with a corresponding substantial drop in the work years of inspection.

Now, has the responsibility grown? Are we seeing a lot more materials that represent a hazard in circulation being used and shipped, et cetera, than we saw in years passed? Has the use of these materials expanded substantially?

Ms. DOUGLASS. I will ask Al to comment on that, but I did want to clarify. That document I am sure you are looking at is from the OTA study, and there was clearly a slight distortion in there.

The Coast Guard did not report their hazardous materials inspectors for some reason in that report, and so it was grossly underestimated in 1984, which was the reason it showed a drop. There was not a drop, and I can give you those numbers for the record.

The force has increased. I know in 1984 and 1985 and 1986, each year it has increased, because I know Secretary Dole has been very committed to increasing the number of inspectors and the number of dollars going into safety, including hazardous materials transportation.

I was upset when I saw those numbers in the OTA report. I looked, and they were not exactly accurate. So I will submit that for the record.

[The information follows:]

HAZARDOUS MATERIALS TRANSPORTATION INSPECTORS

[Total work-years]

	1979	1980	1981	1982	1983	1984	1985
U.S. Coast Guard	115.5	115.5	155.8	50.0	40.0	12.0	[1] 178.0
Federal Aviation Administration	36.9	90.0	17.8	8.2	14.1	15.0	14.6
Federal Highway Administration	47.0	49.3	47.3	40.2	25.3	28.0	24.4
Federal Railroad Administration	28.2	33.6	34.7	33.0	46.4	48.0	48.5
Materials Transportation Bureau (Office of Hazardous Materials Transportation)	9.0	10.0	7.5	6.8	6.8	7.5	7.5
Total	236.6	227.4	262.9	138.2	132.5	110.5	273.0

[1] 1985 increase reflects underestimation of hazardous material inspectors during previous years.

Ms. DOUGLASS. Al, has the transportation grown?

Mr. A. ROBERTS. The expanding economy or the upswing or downturn of the economy is very, very closely associated with transportation volume, as I am sure you have been advised.

INSPECTION AND ENFORCEMENT STAFFING

Senator LAUTENBERG. The question is a bit moot if, in fact, the numbers are off, because to me the important thing was what is the scope of the responsibility and the number of people available to do that kind of work.

Let me ask you this, then. How many of these 1,237 are assigned, do you know, solely to hazardous materials inspection, that inspector work force?

Mr. A. ROBERTS. I think some of the answers, Senator, we would have to supply for the record. The Federal Railroad Administration has 38 full-time hazardous materials inspectors.

There have been some changes in the Federal Highway Administration, so we would have to supply this for the record.

I think that the vast portion of the numbers you are looking at there, though, are inspectors who are performing their hazardous materials function as an associated function to other duties.

In the aviation area, for example, many of the people doing antiterrorist work are also cross-trained in hazardous materials. There has been a substantial upswing in aviation airport inspection of cargo facilities in the last several years because of this. It is a good resource. They cannot always be on the foreign duty flying U.S. flag carriers, so they have been used domestically in hazardous materials cargo inspection work. I personally visited some of the airports and seen the result of this effort.

We would have to supply this for the record.

[The information follows:]

Of the total authorized inspection force, 57 positions are assigned solely to hazardous materials inspections. The Federal Aviation Administration and RSPA each have 11 of these positions; the remaining 35 are in the Federal Railroad Administration.

Mr. A. ROBERTS. We really have to break it into two components. One is full-time occupation in the work, and one is associated responsibility.

Senator LAUTENBERG. The 1,237 positions or those available for the inspection force, how many of those positions were filled? Do you know that? You are not at full staff with your small force, but are the others also——

Mr. A. ROBERTS. I believe these were actually based on personnel who were on board and assigned to inspection activities. It was not a matter of authority. The vast number of those were Coast Guard personnel. They go on board vessels and perform a number of different functions. If there is dangerous or hazardous cargo on board, they also perform some inspection in that area, including the documentation.

Ms. DOUGLASS. I think I can understand exactly what you are asking, and I do not know the answer to that, but I will be glad——

Senator LAUTENBERG. Is yours the only agency that did not fill its complement?

Ms. DOUGLASS. Well, we are obviously trying to fill ours and intend to, but I think that people retire, and if you get extra positions it takes some time to hire.

So I will supply that for the record for you.

Senator LAUTENBERG. OK, if you would, I would like to have that information.

[The information follows:]

That number was based on estimates of fiscal year 1987 staffing by the modal administrations in preparing for last year's hearing. After polling the modal administrations again, the revised number of authorized hazardous materials inspectors is 1,614. The difference is due to underestimation by the U.S. Coast Guard and Federal Highway Administration.

The number of inspectors presently employed is 1,426. The difference between this number and the authorized number comes mainly from the fact that the Federal Highway Administration is still in the process of filling 34 inspection positions, and has another 150 inspectors in training (the result of a significant staffing increase authorized by Congress in fiscal year 1986). In addition, the Federal Aviation Administration and the Federal Railroad Administration are each one below their authorized strength, and RSPA is in the process of filling its three vacant positions.

SUBMITTED QUESTIONS

Senator LAUTENBERG. You have been very helpful, and I appreciate the information you have supplied. There are more questions we are going to ask of you. We would hope that you would accelerate the pace from where we were in that rulemaking proposal from 1982 to 1987.

I understand that life grows more complicated, but at some point you have to say this is where we stop the process for now, and whatever incremental stuff we have to do we are just going to have to do at a later point.

[The following questions were not asked at the hearing but were submitted for response for the record:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

SAFETY DATA

SENATOR LAUTENBERG: Estimates are that between 10 and 20 percent of the millions of tons of goods shipped each year are classified as hazardous materials. It is evident, therefore, that we must see to it that we have in place sound regulatory controls over these shipments. And we also must enforce those in a manner that leaves no doubt about our intention to assure that the public is properly protected. This is especially critical in states like New Jersey with its busy transportation network. But the statistics we see on the deaths, injuries, and damages associated with accidents involving hazardous materials are stark reminders that all of those responsible for protecting the public have to do more. In New Jersey there were three deaths last year--three too many as far as I am concerned.

You state that the safety record for the transportation of hazardous materials has been very good and that you are committed to ensuring that this excellent record continues. Yet, last year there were 16 deaths and 315 injuries associated with the transportation of hazardous materials. These represent twice as many deaths as there were in each of the three preceding years and a substantial increase in the number of injuries.

The data for 1986 suggest an upward trend. What is going wrong?

ANSWER: Over the past 10 years, there has been an average of just over 18 deaths per year due to hazardous materials incidents, and the 1986 record of 16 is consistent with this history. Although even one death or injury is too many, considerable year-to-year variation can be expected statistically when dealing with infrequent events. As I mentioned earlier, most of the serious incidents involve a tiny percentage of the huge quantities of flammable liquids shipped daily to heat our homes, power our industries, and fuel our transportation system.

SENATOR LAUTENBERG: Give us some examples of how the results of investigations into the causes of accidents have resulted in changes to your regulatory efforts.

ANSWER: Several accident investigations by the National Transportation Safety Board (NTSB) have resulted in recommendations requiring new regulations or amendments to existing regulations. The following are examples of recent regulatory activities as a result of NTSB investigations.

> New regulation proposed: On January 19, 1985, a tractor with two tank trailers carrying molten sulfur overturned in Benicia, California. Two people were killed, three people hospitalized, the surrounding area was evacuated and the road closed for 15 hours. As a result of this investigation, NTSB recommended that RSPA regulate molten sulfur and to prescribe packaging and handling standards. In response, RSPA published a notice of proposed rulemaking (NPRM) on molten sulfur, November 21, 1986, which deals with the classification of such material and its packaging requirements. The comment period closed February 19, 1987 and the comments are now being evaluated. We expect to publish a final rule later this year.

Amendment to a Regulation: On May 22, 1981 a Southern Pacific freight train derailed at Surf, California. One employee was injured and 16 people were treated at hospitals. Damage was estimated at $1,552,522. Most of the damage was caused by a tank car marked "empty" that had an unknown residual amount of hydrogen fluoride which escaped and caused a gas cloud. As a result of the investigation of this accident, NTSB recommended that title 49 CFR 171.8 be amended to define the quantity of a hazardous material that can be moved in an "empty" tank and to amend 49 CFR 174.25(c) to require shippers to show the approximate weight of hazardous material contained in a tank car marked empty. Accordingly, RSPA published NPRM on the subject on July 23 1981 and on September 26, 1985 RSPA issued a final rule for the placarding of "empties" which established a "RESIDUE" placard for use on tank cars that have been "emptied".

RSPA ENFORCEMENT PROGRAM

SENATOR LAUTENBERG: As your statement shows, RSPA is responsible for both the development and enforcement of regulations for hazardous materials transportation by the various modes of transportation and by pipeline. I have several questions about how you carry out your enforcement responsibilities.

Specifically what is the nature of your enforcement program?

ANSWER: RSPA's enforcement responsibilities for the transport of hazardous materials by various modes of transportation and by pipeline are respectively delegated to the Office of Hazardous Materials Transportation (OHMT) and the Office of Pipeline Safety (OPS).

OHMT: Although OHMT develops the regulations for hazardous materials transportation by the various modes of transportation, enforcement authority has been delegated to five different organizations in the Department, including RSPA. The nature of OHMT's enforcement program is one in which OHMT seeks to gain compliance with the Hazardous Materials Regulations through:

- o Inspections
- o Issuance of warning letters
- o Issuance of compliance orders
- o Issuance of civil penalties

OPS: OPS' pipeline enforcement program encompasses five principal functions:

- o Inspecting interstate gas transmission and hazardous liquid pipeline facilities to ensure that such facilities comply with the safety regulations.
- o Oversight of the natural gas and hazardous liquid pipeline safety programs of State agencies participating in the Federal/State cooperative programs under section 5 of the Natural Gas Pipeline Safety Act (NGPSA) and section 205 of the Hazardous Liquid Pipeline Safety Act (HLPSA) and oversight of the programs of those State agencies acting as agents for RSPA with regard to inspection of interstate gas operators to ensure adequate program performance.
- o Inspecting intrastate gas and liquid pipeline systems under direct RSPA jurisdiction because the State law does not include the facilities (such as certain municipal and master meter gas systems), or no State agency participates in the

program, to ensure compliance with the pipeline safety regulations.

- o Investigating pipeline failure incidents to determine whether violations of the regulations occurred or whether revisions or additions to the regulations are needed.
- o Training OPS and State inspectors in the application of Federal pipeline safety regulations and enforcement procedures to assure uniformity of enforcement program.

SENATOR LAUTENBERG: Just what does RSPA do?

ANSWER: OHMT: OHMT's enforcement focuses on areas that are not covered by the four modal enforcement programs. The modal inspectors key their efforts almost exclusively to carrier inspections or terminal inspections specific to their particular mode of transportation. OHMT utilizes more specialized inspection knowledge and experience: its inspections are trained to examine not only how a container is marked and labeled, but also how the container is manufactured and whether or not the container is authorized for the material being placed in it. In addition, OHMT has inspectors who specialize in radioactive materials transportation and the manufacture of compressed gas cylinders.

OHMT asserts primary enforcement jurisdiction over container manufacturers, except highway cargo tank and rail tank car manufacturers. OHMT conducts facility inspections of companies who manufacture small containers such as compressed gas cylinders, steel drums, plastic containers, portable tanks, and fiberboard boxes; and related businesses, such as independent inspection agencies; cylinder retesters, rebuilders, and repairers; and drum reconditioners. OHMT conducts facility inspections of companies who offer hazardous materials, including radioactive materials, for transportation, with emphasis on the packaging. OHMT also inspects packages of hazardous materials moving within the transportation system, particularly at air freight terminals, ports, and other waterfront facilities.

Because its inspectors work exclusively in hazardous materials and in related specialized areas, OHMT also provides assistance to the modal administrations, to other government agencies, and to state enforcement organizations. Within the Department, OHMT has assisted all the modal administrations in the area of radioactive materials, and has conducted joint inspections of spent nuclear fuel shipments with highway and rail inspectors. OHMT works with the U.S. Coast Guard at port facilities providing assistance and on-the-job training to its port safety specialists. OHMT has worked in the area of explosives transportation with the Bureau of Alcohol, Tobacco & Firearms and the U.S. Customs Service, and has assisted the GSA and DOD Inspectors General in conducting criminal investigations of companies having government contracts for inspection and testing of compressed gas cylinders. OHMT has provided training in radioactive materials and cylinders to state organizations and has worked with several states in conducting hazardous materials inspections.

OPS: OPS, through its five regional offices located in Washington, D.C.; Atlanta, Georgia; Kansas City, Missouri; Houston, Texas; and Lakewood, Colorado, and its training center in Oklahoma City, Oklahoma, performs pipeline safety inspections of pipeline operators subject to direct Federal inspection, initiates enforcement proceedings when pipeline safety violations or hazardous conditions are found, and investigates citizen complaints and pipeline accidents. Enforcement actions include civil penalties, compliance orders, hazardous facility orders, and warning letters. Criminal penalties could be taken against any person who willfully violates a regulation adopted under the NGPSA, the HLPSA, or an agency order.

OPS annually evaluates each State pipeline safety program to verify that it is meeting all terms of its certification or agreement with OPS. Each certified State program is evaluated by OPS to ensure that all pipeline safety regulations are being enforced. States that only perform inspections as agents are evaluated to ensure that violations are forwarded to OPS for enforcement.

OPS manages Federal grants to aid States in conducting pipeline safety programs, and conducts seminars on pipeline safety for industry personnel, particularly small sized systems, throughout the country. Additionally, OPS collects, compiles, and analyzes pipeline safety and operating data for its use in developing studies and regulations on pipeline safety.

OPS assesses and collects user fees for carrying out the Federal/State pipeline safety program, and compiles national statistics on pipeline safety and makes these statistics available to interested parties.

SENATOR LAUTENBERG: How many formal enforcement proceedings did you conduct last year and what did they consist of?

ANSWER: OHMT: The word "formal" has a precise meaning in OHMT's enforcement procedures in Part 107 of Title 49; it refers to the election by a respondent in a civil penalty case for a formal hearing, which is a full evidentiary proceeding before an administrative law judge. No formal hearings were requested in 1986.

The information on OHMT safety enforcement activities for 1986 follows:

HAZARDOUS MATERIAL ENFORCEMENT ACTIVITY
1986

Enforcement Activity	Number
Enforcement Cases Initiated	
Civil Penalties	38
Compliance Orders	0
Imminent Hazard Order	0
Civil Penalty Actions	
Penalties Assessed	38
Amount	$142,450
Penalties Collected	21
Amount	$106,663
Warning Letters Issued	124
Enforcement Cases Closed Without Penalty	1

OPS: The information on OPS safety enforcement activities for 1986 follows:

PIPELINE SAFETY ENFORCEMENT ACTIVITY
1986

Enforcement Activity	Gas	Liquid
Enforcement Cases Initiated		
Civil Penalties	4	3
Compliance Orders	10	1
Hazardous Facility Orders	0	3
Civil Penalty Actions		
Penalties Assessed	4	3
Amount	$167,000	$226,000
Penalties Collected	4	1
Amount	$111,300	$ 2,000
Warning Letters Issued	67	32
Enforcement Cases Closed Without Penalty	15	8

HAZARDOUS MATERIALS ENFORCEMENT INSPECTIONS FORCES

SENATOR LAUTENBERG: In response to a question I asked last year, you responded for the record that the Federal inspection force for hazardous materials amounted to 1,237 inspectors for F.Y. 1987. According to the data you provided this workforce was spread among various other agencies such as FHWA and FRA (Eleven of the 1,237 were in RSPA).

Are the 1,237 inspectors assigned solely to hazardous materials inspections?

ANSWER: The information provided to you last year was based on estimated staffing levels by some of the modal administrations. The number of hazardous materials inspectors allocated for F.Y. 1987 is 1,614; the number actually conducting inspections is 1,426. The difference between last year's number of 1,237 and this year's 1,614 is due to underestimation by the Coast Guard and the Federal Highway Administration. The difference between this year's allocated number and the actual number is due to the fact that a large number of the Federal Highway personnel are still in a training status.

Of the total number of federal inspectors involved in hazardous materials inspection work, 57 positions are assigned solely to hazardous materials inspections. The remainder of the inspectors are modal field inspectors who have other safety inspection duties in addition to hazardous materials.

SENATOR LAUTENBERG: If not, what percentage of their time do they spend in hazardous materials inspections?

ANSWER: Of the remaining inspectors, 863 U.S. Coast Guard inspectors spend 20.4% of their time conducting hazardous materials inspections; 180 Federal Aviation Administration inspectors spend 3.0%; 170 Federal Highway Administration inspectors spend 7.0%; and 59 Federal Railroad Administration inspectors spend 15% and 102 spend 5%.

SENATOR LAUTENBERG: How many hazardous materials violations did this Federal inspections force report in F.Y. 1986? So far in F.Y. 1987?

ANSWER: The information reporting requirements established by RSPA to cover hazardous materials violations extend only to completed enforcement actions. Due to the great volume and diversity of each modal program, as well as the decentralized nature of some of the programs, information on every violation noted by each inspector has not been considered necessary to collect for reporting purposes.

SENATOR LAUTENBERG: In how many cases did the violations reported in F.Y. 1986 result in fines or other enforcement actions?

ANSWER: The information for F.Y. 1986 on completed civil penalty actions is as follows:

U.S. Coast Guard - Not available
Federal Aviation Administration - 54 cases - $386,082
Federal Highway Administration - 89 cases - $368,800
Federal Railroad Administration - 73 cases - $621,575
Research & Special Programs Administration - 15 cases - $79,163

The total number of cases completed was 231, with $1,455,620 collected in civil penalties. Although the U.S. Coast Guard's information was not available, the total penalty figure is ahead of the $1,404,100 reported by the five organizations in F.Y. 1985.

HAZARDOUS MATERIAL PORT INSPECTIONS

SENATOR LAUTENBERG: Last year you stated that additional hazardous materials inspector positions would be used to augment the inspection of import and export shipments of hazardous materials at U.S. ports and waterfront facilities.

Which ports are you most concerned about?

ANSWER: Since this effort began back in 1984, RSPA has conducted inspections at the major ports on the East, West, and Gulf coasts. RSPA has coordinated its inspections with the U.S. Coast Guard, and has worked with inspectors from the marine safety office responsible for a particular port, who, as part of a recently adopted program, are randomly opening and inspecting freight containers containing hazardous materials.

Based on these inspections, RSPA is most concerned about the ports of Newark/New York, primarily because its size and traffic volume, Miami, and San Juan. RSPA was requested by the Coast Guard to assist them at the latter two ports, and numerous instances of noncompliance with the hazardous materials regulations were found. Other ports which are large and have a large volume of hazardous materials are Houston and Los Angeles/Long Beach.

In addition to the inspection of regulated entities in ports, RSPA is also inspecting companies that have filed tariffs with the Federal Maritime Commission as nonvessel-operating common carriers (NVOCC). These companies pick up or receive commodities from shippers, consolidate and load them into freight containers, prepare the necessary paperwork, such as the ocean bill of lading, for the vessel movement, and deliver the freight containers to the pier. The Coast Guard requested that RSPA inspect these companies, which were unknown to it at the time, because of perceived noncompliance and because most NVOCC are located away from the waterfront and thus not within the enforcement jurisdiction of the Coast Guard. RSPA is concerned about these companies, and because they are a new area of inspection, RSPA has made a concerted effort to determine their level of compliance.

SENATOR LAUTENBERG: How many inspectors are responsible for the ports in New Jersey and those of the neighboring States?

ANSWER: At the present time there are three inspectors who conduct port and related inspections, with a fourth scheduled to begin in early May 1987. RSPA does not assign its inspectors to particular ports; they inspect at all the major ports in the country. It should be noted that the Coast Guard has an active inspection program at the port of New York and the New Jersey ports.

SENATOR LAUTENBERG: How many inspections did they make in 1986 and F.Y. 1987 to date?

ANSWER: In F.Y. 1986, RSPA conducted 45 shipment observation inspections at the ports of Newark and Elizabeth, and nine NVOCC inspections. RSPA inspectors conducted 15 shipment observation inspections at the port of Baltimore and one NVOCC inspection. RSPA also conducted inspections in F.Y. 1986 at the ports of Oakland, Seattle, New Orleans, Jacksonville, and Los Angeles/Long Beach. At these ports RSPA conducted 41 shipment observation inspections and five NVOCC inspections.

Thus far in F.Y. 1987, RSPA has conducted 32 shipment observation inspections at the ports of Newark, Hampton Roads (Portsmouth/Norfolk), and Baltimore and three NVOCC inspections in New Jersey. RSPA has also inspected the ports of Miami, San Juan, and Los Angeles/Long Beach, conducting 47 shipment observation inspections and five NVOCC inspections.

SENATOR LAUTENBERG: How is their work load established?

ANSWER: When RSPA began its involvement in this area, it attempted to inspect as many of the ports as possible, at least once. This was fairly easy to do because of the relatively small number of ports. In doing so, RSPA determined which ports needed to be inspected on a more frequent basis, based on size of the port, the hazardous materials volume, and level of noncompliance. In addition, at the Coast Guard's request, RSPA has been conducting joint inspections in this effort, most notably at the ports of Miami and San Juan. Thus the work load is established by RSPA's knowledge of the ports requiring more inspection emphasis, as well as by requests for assistance from the Coast Guard.

SENATOR LAUTENBERG: How many inspections are planned for F.Y. 1988 for all ports and waterfront facilities?

ANSWER: RSPA plans to conduct 250 shipment observation inspections at U.S. ports and 35 inspections at NVOCC facilities.

REGULATORY BACKLOG

SENATOR LAUTENBERG: Last year the Congress provided the 12 additional positions you requested for the Office of Hazardous Materials Transportation (OHMT). Seven of these were specified for your rulemaking activity to help reduce the backlog. At that time, 300 petitions were pending. You are requesting another seven positions for OHMT this year, two of which are for rulemaking.

What is your current backlog?

ANSWER: The petition backlog for rulemaking action has been reduced considerably during the past year. There are approximately fifty petitions pending which are not affected by rulemakings now in progress.

SENATOR LAUTENBERG: What specifically will the two additional positions enable you to do that you would not otherwise accomplish?

ANSWER: Two positions are being added to the overall rulemaking activity to: a) strengthen the technical support so critical in ensuring that the new rules will be responsive and cost effective; and, b) ensure coordination and consistency with international standards. One position is for an additional Mechanical Engineer to support increased needs in the structural, failure, and risk analysis of bulk transport vessels such as rail tank cars and cargo tanks. Another position is being moved to the rulemaking function from the Management and Administration function. This position will coordinate U.S. participation in the numerous international hazardous materials standards setting bodies and provide the necessary feed back and consistency to our on-going domestic rulemaking actions.

SENATOR LAUTENBERG: How much will you reduce your backlog by next year, assuming you get these two positions?

ANSWER: We consider that our current backlog is approaching a normal level and that the two additional positions will enable us to keep the level under control and at the same time produce rules that will be responsive to the safety needs of our transportation system. It is doubtful that the backlog can be reduced much more than it is at the present time. Considering the amount of time it takes to complete a rulemaking project, there will probably always be a small backlog of rulemaking petitions on file. However, due to increased rulemaking activity in OHMT, the backlog could increase, if we do not receive the additional staff.

SAFETY TASK FORCE RECOMMENDATIONS
PERFORMANCE-ORIENTED STANDARDS

SENATOR LAUTENBERG: One of the key recommendations of the safety task force study of RSPA is the adoption of performance-oriented standards in place of the time consuming special permitting process that now exists. The task force specifically recommended that RSPA expedite its rulemaking on "performance-oriented packaging standards" (HM-181). The current target date for publication of a final rule, I understand, is 1988. You indicate that you will soon publish a notice of proposed rulemaking on this matter.

By what date will you have a final rule in place?

ANSWER: The notice of proposed rulemaking is scheduled for publication May 5, 1987. A six month comment period will be provided for interested persons to comment on the proposed changes. Following the close of the comment period, it is anticipated that six to twelve additional months will be needed to evaluate the comments. Projections beyond that point are not possible to make because they are completely dependent on the issues raised in the comments which cannot be foreseen at this time.

SENATOR LAUTENBERG: The safety task force noted that you only had two persons working 1/2 time on HM-181 in the 1984-85 time frame. The committee has been told that you now have a four-person team working full-time on the project. Is this correct?

ANSWER: A four person team was assembled, including members from FHWA and FRA, for the final preparation and internal coordination process of the proposed rule. Now that the notice of proposed rulemaking is awaiting publication in the Federal Register, followed by the 6 month comment period, a heavy concentration of effort on HM-181 is not required. The four-person team is prepared to begin work on a final rule, should DOT decide to proceed with one based on the evaluation of comments received.

SENATOR LAUTENBERG: Why will you still not have a final rule in place before 1988?

ANSWER: As mentioned above, adequate time must be provided for public comments, the evaluation of those comments, and to satisfy administrative requirements concerning the evaluation of options. It is simply not possible to make predictions beyond that point.

GLOBAL POSITIONING SYSTEM RESEARCH

SENATOR LAUTENBERG: In your budget justification (p. 52) you state that you have been working on enhancement techniques for the Global Positioning System (GPS) which will provide the accuracy needed to meet civil navigation needs. Also, new operational procedures will be required to fully integrate GPS within the marine and air user communities and liability and standardization issues remain to be examined.

Are you saying then, that the technical problem of accuracy needed for civil aviation navigation is close to being resolved? Please explain the status of your work.

ANSWER: The GPS accuracy that will be available to the civilian user is adequate for air navigation. Certain marine and land navigation/vehicle location applications require accuracies greater than the 100 meters 2drms accuracy that will be provided. That is RSPA and the Coast Guard have a joint program to evaluate the standards for a differential GPS system. Testing of a differential GPS system, capable of 10 meters 2drms accuracy, being developed at the Coast Guard Research and Development Center will begin this summer.

SENATOR LAUTENBERG: How will the availability of GPS for civil aviation affect FAA's current efforts to upgrade the National Airspace System?

ANSWER: The currently planned satellite constellation does not meet the FAA coverage and integrity requirements for sole means navigation. Used only as a supplemental system it will have little impact, if any, on upgrading the National Airspace System.

SENATOR LAUTENBERG: Will it eliminate the need for any new ground-based systems being developed and procured by FAA?

ANSWER: Until GPS can be considered a sole means radionavigation system it will not eliminate the need for any present FAA ground-based system.

PIPELINE SAFETY

SENATOR LAUTENBERG: You also state that pipelines are our safest mode of transportation of hazardous materials. Yet in 1986 there were 26 deaths from pipeline failures - 13 more than all other modes of transportation combined and there have been no deaths associated with some modes for the past 10 years, according to your data. Again, we need to understand the basis for your statement.

Therefore, what are your criteria.

ANSWER: The Department of Transportation compiles data regarding fatalities from all transportation modes annually in the National Transportation Statistics. The following table and chart included in the July 1986 edition of that report clearly indicate that pipeline transportation results in one of the lowest number of fatalities, usually about 0.07 percent every year. Further, these statistics are particularly important when one understands that hazardous liquid pipelines alone, carry one-fourth of this country's intercity freight.

(The information follows:)

Table 15. Number of Fatalities by Mode
1974-1985

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
HIGHWAY												
Motor Vehicle Traffic	45,196	44,525	45,523	47,878	50,331	51,093	51,091	49,301	43,945	42,589	44,257[r]	43,800[p]
Motor Carriers of Property[1]	2,429	2,232	2,520	2,983	2,998	3,072	2,528	2,810	2,479	2,528	n/a	n/a
Motor Carriers of Passengers[1]	77	59	62	87	68	60	74	95	76	67	n/a	n/a
RAILROAD												
Rail-Highway Grade Crossing	1,224	966	1,174	996	1,064	883	833	728	607	575	649	576[p]
Rail[2]	689	575	510	534	582	546	584	556	512	498	598	454
RAIL RAPID TRANSIT	n/a	n/a	n/a	70	50	62	83	103	87[c]	50[c]	55[c]	15[p]
AVIATION												
U.S. Air Carriers[3]	460	124[r]	38	655[r]	160	354[r]	1[r]	4	234[r]	15	4[p]	526[p]
Commuter Air Carriers[4]	n/a	28	27	32	48	66	37	34	14	12[r]	46[p]	35[p]
On-Demand Air Taxis[5]	n/a	69	100	118	155	77	105[r]	94	72	62	52[p]	77[p]
U.S. General Aviation[6]	1,327	1,252[r]	1,216[r]	1,276[r]	1,556[r]	1,221[r]	1,239[r]	1,282	1,182	1,081[r]	1,115[p]	944[p]
MARINE												
Waterborne Transportation	218	243	248	157	186	174	206	154	223	289	113[p]	69[p]
Recreational Boating	1,446	1,462	1,264	1,312	1,321	1,400	1,360	1,206	1,178	1,241	1,063	1,116
MATERIALS TRANSPORT												
Liquid Pipeline	10	7	5	3	3	4	3	5	0	6	0	5
Gas Pipeline	24	14	63	36	31[a]	45[a]	11	17	31	12[b]	35[b]	28[p]
Hazardous Materials	30	27	24	26	45	17	19	25	12	8	7	8[p]

n/a = not available.
r = revised.
p = preliminary.

[a] Includes preliminary notification of Pipeline leaks via telephone reports.

[b] Beginning with 1983 data, Pipeline Incidents are credited to the year in which they occurred, not the year in which the report was received.

[c] Fatalities resulting from train and nontrain accidents. Prior to 1982, fatality data include train accidents, train incidents and nontrain incidents.

[1] Includes only those motor carriers operating in interstate or foreign commerce.

[2] Fatalities resulting from train accidents, train incidents and non-train incidents.

[3] Large carriers operating under 14 CFR 121, 125, and 127 only, all scheduled and nonscheduled service.

[4] All scheduled service operating under 14 CFR 135 (commuter air carriers).

[5] Non-scheduled service operating under 14 CFR 135 (on-demand air taxis).

[6] All operations other than those operated under 14 CFR 121 and 14 CFR 135. Includes air carrier fatalities when in collision with General Aviation aircraft.

Source: See Appendix A, pp. A-22, A-23.

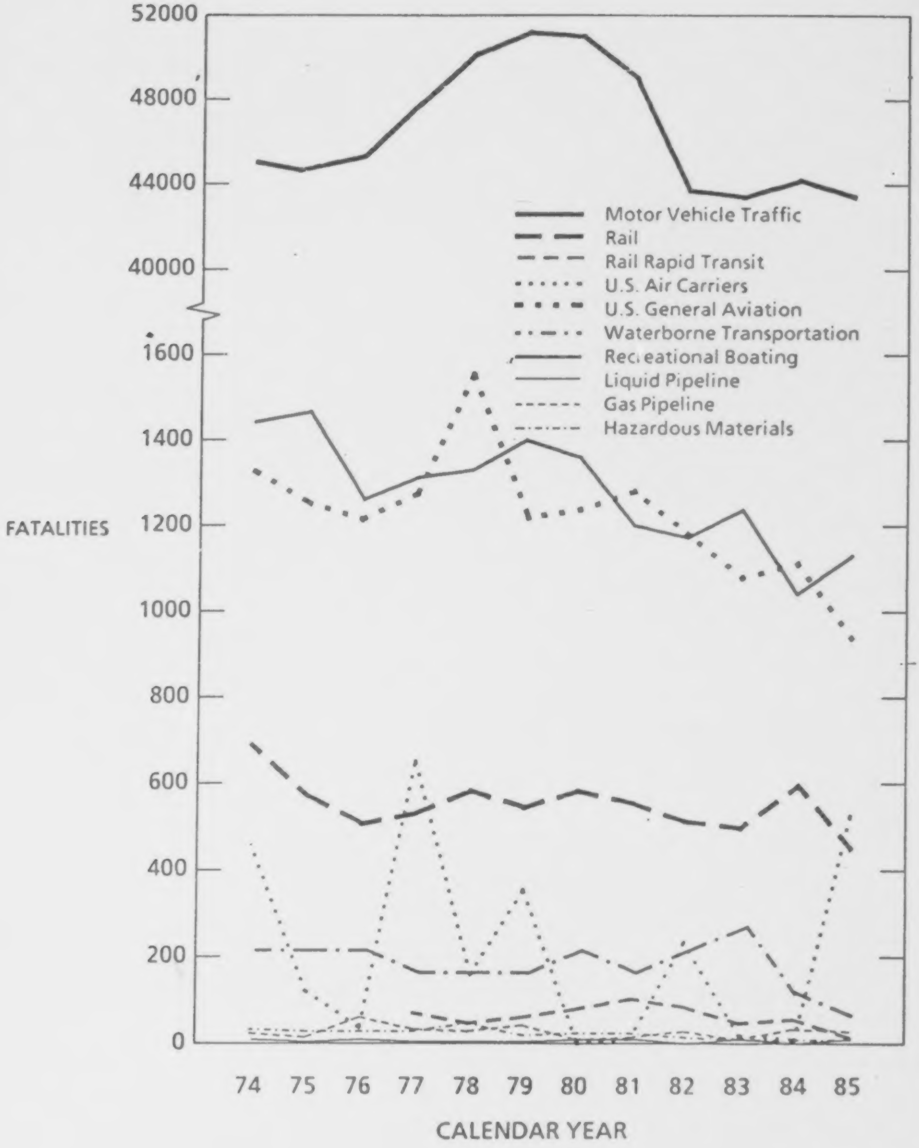


Figure 17. Number of Fatalities by Mode, 1974-1985

ENFORCEMENT RESOURCES

SENATOR LAUTENBERG: What do you believe are the most pressing enforcement problems your agency has to deal with?

ANSWER: The enforcement responsibilities of RSPA are divided, as previously mentioned, between OHMT and OPS. Consequently, each office will answer each question separately.

OHMT: At the present time, OHMT is concerned about the great volume of hazardous materials that is moving into and out of the country in freight containers. The port area of Newark/New York alone handles 10,000 freight containers per day. Although most of them do not contain hazardous materials, even a small percentage is difficult to monitor. The Coast Guard has been conducting a random-opening inspection program for the last year, in an effort to determine compliance.

Another area of concern is the large number of companies who are in the business of hydrostatically (water pressure) retesting certain compressed gas cylinders. This regulated segment accounts for the majority of the complaints received by OHMT's Enforcment Division. OHMT has been citing companies for violations of the regulations and has been making civil penalty enforcement cases. OHMT has also conducted mass mailing campaigns in which advisory information is sent to these companies.

OHMT is also concerned about the apparent general noncompliance of companies in Puerto Rico which are involved in the importation, sale, and distribution of liquified petroleum gas (LPG) cylinders. LPG is used by most of the population for cooking and heating. OHMT has conducted a preliminary investigation, meeting with several companies involved in the business, and has made contact with the Puerto Rican Public Service Commission and the U.S. Customs Service. A plan is being developed to rectify the situation without undue disruption of the economy.

OPS: We have identified two principle categories of violations in which we initiated related projects involving research, technical assessment, and rulemaking. The two categories are corrosion control and operation, maintenance and emergency procedures.

SENATOR LAUTENBERG: Do you believe that you have the resources commensurate with your responsibilities?

ANSWER: OHMT: We requested, and Congress authorized, an increase of enforcement resources when additional positions were authorized in FY 1986 and FY 1987. OHMT believes that by sound planning, based on the assessment of data it compiles, as well as by seeking inspectors with experience in the areas which are of most concern, it can expand its coverage and enhance its ability to monitor activities in those areas.

OPS: Yes, we have the resources to perform comprehensive inspections of operator inspection units on an average frequency of 2.5 years with many operators being inspected annually.

SENATOR LAUTENBERG: Why do you have over three times as many personnel assigned to rulemaking as you do to enforcement in the Office of Hazardous Materials Transportation (44 versus 13)?

ANSWER: OHMT's regulatory responsibilities encompass all aspects of hazardous materials transportation. This includes carrier operations, and the lisitng, classifying, packaging, documenting, marking, labeling, and placarding of hazardous materials for all modes of transport. While OHMT's enforcement responsibilities are important, they are not as broad in scope as its regulatory responsibilities. OHMT's enforcement personnel conduct specialized compliance investigations of manufacturers who produce packagings for use in all modes of transport and in areas of intermodal involvement such as marine terminals. They conduct technical investigations of shipper activities, e.g., those of a shipper of radioactive materials or explosives, that may require specialized knowledge and experience than would be expected of the more than 1,000 inspectors in the other operating administrations who concentrate primarily on carrier operations and shipper activities closely associated with the offering of hazardous materials for transportation. The other operating administrations combined have no more than ten persons assigned to providing full-time support to the regulatory program; therefore, OHMT must maintain adequate staffing in this area to carry out rulemaking, exemptions, approvals, interpretations, certification, technical support activities and be responsive to more than 50,000 written and telephonic inquiries per year.

SENATOR LAUTENBERG: Overall, would you say that the job to be done is more one of enforcement of existing regulations rather than promulgation of more regulation?

ANSWER: OHMT: At the present time, OHMT views its overall regulatory effort as one of improvement of the existing regulations as well as promulgation of several new regulations. Docket HM-181, for example, which is concerned with performance-oriented standards for small packagings, is a sweeping and complex rulemaking, intended to streamline and simplify present regulations, and bring the United States in line with the rest of the world's hazardous materials regulatory scheme. However, a necessary and equally important facet of a Federal safety program is assuring compliance with our regulations. This is done through enforcement, training and communication with industry and the states.

OPS: The answer for both natural gas and hazardous liquid pipelines is the same. The job to be done is more of enforcement. Of course, we do refine our regulations over time as well as promulgate new or expanded rules to meet problems identified through our enforcement efforts.

INTRASTATE PIPELINE SAFETY

SENATOR LAUTENBERG: You state that 48 jurisdictions have developed gas safety programs by adopting Federal pipeline safety regulations and enforcing them with basically the same sanctions as those used by the Department. You further state that these same jurisdictions have assumed responsibility for inspecting intrastate pipeline operators and enforcing the safety regulations.

Based on the actions of those States, would you say that the intrastate gas pipeline area is one that is now under sufficient control?

ANSWER: For the most part, the intrastate gas pipelines in the 48 State programs is under sufficient control. However, a large number of master meter operators are still not subject to the authority of State agencies in several States. Additionally, two of the 48 States do not have safety authority over large numbers of municipally operated gas systems. The Administration's budget for FY 1988 requests an increase in the State grant program of $500,000 in order to encourage States to assume this responsibility as well as responsibility for intrastate hazardous liquid lines.

SENATOR LAUTENBERG: Also, why are only seven States participating in the hazardous liquid program while you have such wide-spread participation in the intrastate gas pipeline program.

ANSWER: The Hazardous Liquid Pipeline Safety Act of 1979 established the statutory authority to allow State agencies to participate in the hazardous liquid pipeline program. We undertook the following actions to establish the Federal/State partnership.

- On December 16, 1981, we sent a letter to the Governor of each State informing them of the new law and requesting their participation in the program.
- In 1982, we completed a program to determine the number, mileage, and location of hazardous liquid pipelines.
- In 1983, we encouraged interested States to develop legislation which would allow them to apply for certification.
- On March 26, 1984, we issued an NPRM proposing a final rule which would extend the hazardous liquid pipeline regulations to intrastate operators.
- On April 23, 1985, the final rule was issued and States were first accepted in the program. However, no Federal funds were available.
- In 1986, we requested and received authorization to fund the States hazardous liquid programs.

Because hazardous liquid lines do not have distribution pipelines (such as natural gas pipelines which distribute natural gas to individual houses), there is limited mileage of intrastate hazardous liquid pipelines in many States. Those States with very limited or no mileage have little, if any, need to join the program. We anticipate that a maximum of 17 States (in addition to the seven existing programs) are likely to participate in the liquid program.

PIPELINE INSPECTIONS

SENATOR LAUTENBERG: You state that you are now able to have a better managed pipeline inspection program through the use of a concept of "operator inspection units."

What exactly does this mean and how will it improve your inspection and enforcement programs?

ANSWER: We have divided all pipeline operators which we inspect into pipeline inspection units. Each unit represents a portion of an extensive pipeline system (or all of a small size system) under the control of a responsible management element of an operator. This concept is efficient and enables us to direct inspection activity to the systems of greatest need. We identified 1,200 units and with our current inspection staff of 20 plan to perform a comprehensive inspection of each unit on an average frequency of 2.5 years. This concept assures that each part of a pipeline system will be inspected on a periodic basis. It also assures that at least a portion of large companies will be inspected annually.

OFFICE OF PIPELINE SAFETY TRAVEL

SENATOR LAUTENBERG: Your budget justification for administration of the Office of Pipeline Safety states that an increase of $50,000 over F.Y.

1987 travel funds of $212,000 is needed in part because of increased inspection activity.

How many personnel are required to travel to conduct inspections?

ANSWER: For FY 1988, we plan on 20 people conducting pipeline safety inspections--five region chiefs and 15 pipeline safety inspectors.

SENATOR LAUTENBERG: How many inspections were conducted last year and this fiscal year to date?

ANSWER: The Office of Pipeline Safety (OPS) conducted 343 inspections in FY-86. For the first 6 months of FY-87, we have conducted 139 inspections. The present 1987 inspection total reflects a temporary loss of inspection staff personnel due to maternity leave, retirement, and promotion, as well as several incidents on the Williams pipeline system, particularly in Minnesota, requiring an extremely unusual amount of OPS inspectors' time.

SENATOR LAUTENBERG: How many inspections will be made in F.Y. 1988, after considering the increased subsistence costs for travel?

ANSWER: Each inspector should make 32 scheduled pipeline inspections in 1988. The pipeline safety inspectors conduct the scheduled pipeline inspections. The Southwest Regional Chief, because there are only five States participating in his region's program, also conducts scheduled inspections. Based on the above, we plan on conducting 506 inspections.

INSURANCE CLAIM COSTS

SENATOR LAUTENBURG: Your Budget justification shows that $150,000, or half of the total administrative costs of the Office of Program Management and Administration in FY 1987 was for Insurance Claims. For FY 1988 you are estimating $47,600 or a reduction of $102,400.

What are these claims for?

ANSWER: These claims are to pay the disability retirement of the former director of the Transportation Safety Institute. The FY 1987 request of $150,000 reflected the disability amount that accrued during the pendency of the former director's claim proceedings.

SENATOR LAUTENBURG: Is the $47,600 for FY 1988 the total you are planning for, or is the reduction for the Office of Program Management due to a reallocation of some costs to other offices?

ANSWER: The $47, 600 is the total request for FY 1988 and will cover the disability retirement cost of the former director of the Transportation Safety Institute.

SENATOR LAUTENBURG: Is so, what is the total amount of claims you are requesting funds for?

ANSWER: The RSPA is requesting a total of $47, 600 for insurance claims for FY 1988.

TRANSPORTATION SYSTEMS CENTER

SENATOR LAUTENBERG: In regards to the Transportation Systems Center (TSC), is it your view that the various functions carried out by TSC can be readily carried out by the private sector, and it is simply a matter of working out the procedures for the sale of TSC?

ANSWER: I do not view the transfer of TSC to the private sector as a simple matter. A significant planning and deliberation process is anticipated prior to working out the procedures for the transfer.

This is needed to determine to what extent and how best TSC can be defederalized. The proposed transfer of TSC is not viewed as the disposal of a government capability or a simple exercise in contracting out.

As the Secretary and I have stated, the Center is a valued Departmental resource. It possesses a combination of capabilities which are unique in government and the private sector. A defederalized TSC must be able to continue to provide the Department of Transportation and other Federal agencies with the highest quality research, technical, and analytical support in the furtherance of national tranportation priorities, participate in sensitive Departmental deliberations and decision-making processes, and provide independent and objective "smart buyer" support for major Federal system acquisitions. I am confident that these functions can be converted to private sector operation. The success of that transition depends on the particular institutional form that is adopted. The form of defederalization must be carefully examined.

The Administration's proposal to privatize TSC will assure careful planning and resolution of issues, such as employee benefits.

SENATOR LAUTENBERG: How much money do you believe would be saved annually if the Federal status of TSC was eliminated?

ANSWER: The proposed defederalization of TSC is not based primarily on cost considerations. TSC already operates on a business-like basis, making extensive use of the private sector in support of its technical projects and charging "users" the full cost of services rendered. The extent to which cost savings may or may not accrue to the Federal Government will be considered in the course of planning the transfer of TSC to the private sector. A more definitive estimate of the cost implications should be possible after we have completed the transfer planning process.

SENATOR LAUTENBERG: How did you develop your current legislative proposal without doing any planning?

ANSWER: The approach taken in the draft bill that will be transmitted to Congress this session provides that the necessary planning, including identification of transfer options and the selection by the Secretary of the most feasible one, will take place after passage of the bill. The bill is stated in broad language, and is intended to provide a framework for the consideration of the many issues that would arise in the defederalization of TSC, including the protection of employee rights and benefits.

PRIVATE SECTOR TRAINING FOUNDATION

SENATOR LAUTENBERG: Last year you stated that you were continuing to support the private sector foundation concept that would fund and administer emergency response training to state and local response personnel. What has happened? Is the concept of such a foundation still viable or is it being replaced by a series of separate activities on the part of various organizations which, collectively, fall short of the foundation proposal?

ANSWER: I continue to believe the private sector foundation is a good idea. Parts of the concept are being carried out by the private sector, particularly the Chemical Manufacturers Association (CMA). For example, CMA has developed CAER and Chemnet. CAER is a program to provide CMA assistance to local communities for hazardous material emergency response planning. Chemnet is a shipper industry network of fully trained and equipped emergency response teams capable of responding all over the country within several hours of an accident. These efforts are commendable.

The foundation concept, however, envisioned a cooperative effort by the petroleum industry, the trucking industry, the railroad industry, the chemical industry, and others. It also involved the commitment of dollars to develop grants to the states for training. These latter two concepts have not been achieved. The reason is that while some agreed to support the concept, some felt, particularly the petroleum industry, that legislation was preferable. These persons preferred legislation for several reasons:

(1) Preemption, the quid pro quo for funding, requires legislation;

(2) Voluntary funding was unfair; those contributing were at a disadvantage over competitors not contributing;

(3) Legislative concepts cost individual companies $300 to $1,500 per year whereas the foundation cost companies an average of $20,000 to $50,000 per year;

(4) Legislation was years away, if ever, whereas the foundation was immediate; and

(5) The foundation was not up and going and might be a waste of money.

I personally believe we are moving steadily toward a private sector foundation, but it will require legislation on Federal/State roles and the imagination and know how of an aggressive entrepeneur.

SAFETY TASK FORCE RECOMMENDATION COORDINATION WITH EPA

SENATOR LAUTENBERG: Another recommendation of the task force was that RSPA establish better, more formal coordination with EPA and improve the exchange of technology and information. What have you done specifically to implement this recommendation? Do you have a Memorandum of Understanding regarding your respective roles? Why not?

ANSWER: RSPA continues to work to improve its regulatory relationship and information exchange with EPA. Examples are as follows:

o The Department and EPA have a Memorandum of Understanding which delineates the areas of responsibility for the enforcement of standards applicable to the shipment and transportation of hazardous waste.

o There has been considerable coordination with EPA concerning hazardous wastes, hazardous substances, and materials having the EPA-defined characteristics and their relationship to the DOT hazard classes.

o In November 1986, RSPA published a final rule (Docket HM-145F) on hazardous substances which was carefully coordinated with EPA's Office of Emergency and Remedial Response (Superfund). More recently, RSPA has agreed to assist EPA's Office of Pesticides and Toxic Substances in evaluating packagings for the transport and storage of PCB's. RSPA and EPA are also merging their telephonic spill notification data bases, and have cooperated on a study on the potential problems associated with the possible contamination of non-hazardous goods by hazardous materials when transported in trucks and rail cars.

o Recently RSPA completed a jointly prepared "White Paper" with EPA, FEMA, and USCG that focuses upon Federal statutes and authorities that have a significant impact on programs and policies of State and local governments in five areas of hazardous materials emergency response: (1) incident response; (2) preparedness/planning; (3) training; (4) technical assistance; and (5) information exchange. The paper examines the authorities of each agency to promote and support a national emergency response program involving hazardous materials. It identifies current programs of each agency and how they relate to and support State and local government. This clarification of areas of responsibilities is a preliminary step to further communication and agreements with these agencies.

o RSPA is the DOT member of the National Response Team (NRT) composed of fourteen Federal Agencies including EPA. NRT meets no less than once each month and RSPA has used this forum for coordination with EPA on a number of issues, e.g., the manner of presentation of emergency response planning information. Aside from the Memorandum of Understanding (MOU) which addresses enforcement of hazardous waste requirements, EPA has expressed the view that the respective roles of all agencies that may be involved in hazardous substances and materials issues are clearly defined in the National Contingency Plan, and that there is no need for an MOU between any two or three NRT member agencies.

All of the above examples of coordinated and cooperative efforts have been important and necessary steps in the implementation of the task force's recommendation.

SAFETY TASK FORCE RECOMMENDATION
HAZARDOUS MATERIALS REGISTRATION

SENATOR LAUTENBERG: The Hazardous Materials Transportation Act of 1974 authorized the Secretary to require registration of shippers, carriers, and container manufacturers. A 1980 GAO report recommended a registration program to identify the numbers and locations of carriers, shippers, and container manufacturers involved in the transportation of hazardous materials. The Safety Task Force agreed with GAO on the value of this kind of information but recommended a "pilot study of a limited registration program". You are requesting $220,000 to implement this recommendation.

Why has the Department waited so long to address this problem?

ANSWER: The Department already obtains information on the names and locations of various selective subgroups of the universe of those who are subject to its hazardous materials safety regulations. These subgroups include shippers and carriers of flammable cryogenic liquids, drum reconditioners, and manufacturers of various types of cylinders. There are, however, complex issues and a wide range of alternatives associated with further extending the Department's authority to register, or obtain additional information on, other groups currently subject to the hazardous materials regulations. Not the least of these issues involves the costs and benefits of obtaining additional information, and the administrative/record-keeping burden, both to the industry and the government, which such an information-collection effort might entail. A draft study examining these issues has been completed and is now undergoing internal review. As soon as final decisions are made on whether and how best to obtain additional information on the transportation of hazardous materials, RSPA will begin taking whatever steps are necessary to address this problem, including rulemaking.

SENATOR LAUTENBERG: Don't you have to know the universe of actors you're attempting to regulate to plan your enforcement strategy?

ANSWER: The hazardous materials regulated community is so large that inspection of every facility, manufacturer, shipper and carrier is neither feasible nor cost effective. The Department's enforcement strategy relies upon a variety of criteria which serve to guide and determine how best to deploy its inspection and enforcement resources; such criteria include the review and evaluation of past violation and accident/incident safety records which help identify areas and packagings which warrant a concentrated compliance and enforcement effort.

SENATOR LAUTENBERG: What sort of "pilot registration program" do you have in mind? What entities will it cover? What information do you plan to require?

ANSWER: As previously mentioned, the issues concerning the scope and content of a data-gathering program designed to obtain additional information of the hazardous materials community have been examined in a draft study which is now undergoing internal review. As soon as final decisions are reached concerning the issues examined in the study, RSPA will take further appropriate steps, including rulemaking, to implement these decisions. We will keep the Committee informed as studies are completed and actions are initiated.

CARGO TANK RULE

SENATOR LAUTENBERG: You state that the cargo tank safety rule has generated significant controversy and complex counterproposals. As a result, you have just begun discussions with the interested parties and hope to publish a final rule by FY 1988.

What are the major issues?

ANSWER: The Research and Special Programs Administration (RSPA) and the Federal Highway Administration (FHWA) have held public meetings to discuss comments received from certain trade associations on the notice of proposed rulemaking published under Docket Nos. HM-183, 183A entitled "Requirements for Cargo Tanks". Meetings were held with representatives of the: Compressed Gas Association and National LP-Gas Association on March 20, 1987; Truck Trailer Manufacturers Association on March 31 and April 1, 1987; and National Tank Truck Carriers and American Petroleum Association on April 2, 1987. Some of the major issues discussed with the representatives of the trade associations included:

1. Qualification requirements for cargo tank manufacturers and third party inspection and certification of cargo tanks;
2. Application of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code to the design of MC 306 and low pressure MC 307 cargo tanks; and
3. Design pressure of cargo tanks.

Qualification of cargo tank manufacturers and Third Party inspection and certification of cargo tanks.

Docket Nos. HM-183, 183A proposed that each cargo tank manufacturer hold an ASME Certificate of Authorization and that each specification cargo tank be certified by both the manufacturer and by an Authorized Inspector holding a valid commission from the National Board of Boiler and Pressure Inspectors (National Board). The National Board "is organized for the purpose of promoting greater safety to life and property..." and is the enforcement mechanism used by most states for boiler and pressure vessel regulations. Its inspectors are employees of states or cities or work for an "Authorized Inspection Agency", such as an insurance company. The intent of this requirement was to assure that the design of the overall cargo tank was reviewed and certified by an independent third party. This oversight was intended to cover three separate operations: (1) the design of the liquid or gas pressure vessel; (2) the design of the cargo tank motor vehicle including dynamic loading and attachment of the pressure vessel to the motor vehicle; and (3) production quality control.

RSPA currently requires the use of an independent third party inspector in the design of some high pressure cargo tanks, intermodal portable tanks, certain specification cylinders and recognizes the Association of American Railroads Tank Car Committee for the design approval of tank cars.

In the comments submitted to Docket Nos. HM-183, 183A, most of the industry agreed that each manufacturer should hold an ASME Certificate of Authorization. Further the industry proposed that DOT require each manufacturer to meet additional qualification criteria and be authorized by DOT under a permitting system.

The regulated industry was strongly opposed to the use of National Board Authorized Inspectors for the certification of the entire cargo tank motor vehicle. The industry's position was that it was a small specialized industry and that the cargo tank manufacturer was the best qualified to certify that a cargo tank met the DOT requirements. The industry proposed that DOT require the use of "qualified" or "certified" inspectors in lieu of authorized inspectors. These inspectors would be qualified via a DOT criterion and could be an employee of the manufacturer.

Application of the ASME Code to the design of MC 306 and low pressure MC 307 cargo tanks.

Docket Nos. HM-183; 183A required that MC 306 cargo tanks be "constructed in accordance with the ASME Code" and that all MC 307 cargo tanks be "constructed and certified in accordance with the ASME Code". This would assure that all cargo tanks would be designed and constructed in accordance with the best known and available practices as is currently prescribed in 178.340-2(a). It was realized that MC 306 cargo tanks have design pressures that generally fall outside the range of applicability of pressure vessels stamped with the ASME Code "U". The proposal would require that each cargo tank manufacturer have detailed and specific written manufacturing and quality control procedures which would be followed to ensure that all tanks produced were fabricated in conformance with the specification.

In the comments submitted to Docket Nos. HM-183; 183A, the industry was opposed to requiring that MC 306 and low pressure (design pressure less than 50 psig) MC 307 cargo tanks be constructed in accordance with the ASME Code. The industry has stated that the use of the ASME Code would require a complete redesign of these cargo tanks and that the redesigned cargo tanks could be less safe than those presently manufactured. As an alternative to what was contained in Docket Nos. 183; 183A, the industry proposed that each cargo tank manufacturer should be required to be an ASME Code approved manufacturing facility. This would provide the DOT with the knowledge that each cargo tank manufacturer had an approved facility with an approved quality control procedure. However, the industry proposed that numerous deviations from the ASME Code be authorized in the design of MC 306 and low pressure MC 307 cargo tanks.

Design pressure of cargo tanks.

Docket Nos. HM-183, 183A attempted to correct an oversight in the current regulations. RSPA and FHWA were aware that the present regulations do not clearly state a specific relationship between the design pressure of a cargo tank and the properties of lading which are carried. Further, the present regulations do not specify a consistent relationship between the design pressure and operational factors such as loading and unloading pressures and the pressure of gas paddings. The lack of such a set of specific relationships could result in: (1) the release of a hazardous material under normal transportation conditions; and (2) the uncontrolled release of a hazardous material as a result of a high probability accident. Therefore, RSPA and FHWA proposed that shipper be required to verify that the design pressure of all cargo tanks which they load is adequate for the hazardous material being shipped by the use of a simple formula.

In the comments submitted to Docket Nos. HM-183, 183A, the industry was opposed to the formula that RSPA and FHWA included in the NPRM. The industry stated that the proposed design pressure formula was overly conservative and proposed various alternative method. Presently, the industry is developing the data to support their alternative proposals.

SENATOR LAUTENBERG: I understand that the Advance Notice of Proposed Rulemaking (ANPRM) for this rule was issued in 1982. Why are you just now starting to deal with these controversial counter-proposals?

ANSWER: On June 28, 1982 RSPA published an advanced notice of proposed rulemaking soliciting comments on proposed revisions of the Hazardous Materials Regulations (HMR) addressing the release of lading from MC 306 cargo tanks in an overturn accident. This action was based upon the results of a jointly funded RSPA and FHWA research project on the MC 306 cargo tank which showed this tank was highly susceptible to leakage and fire when involved in an overturn accident.

Additional research and staff reviews of other cargo tank specifications identified a number of actual and potential safety related problems. Because of the scope of these problems DOT believed a broad revision of the HMR with respect to cargo tanks was necessary. Accordingly, the issues addressed by Docket HM-183, as well as a number National Transportation Safety Board recommendations, petitions for rule change, and staff recommendations were incorporated into this project.

On September 17, 1985, RSPA published a notice of proposed rulemaking (NPRM) under Docket Nos. HM-183, 183A, titled Requirements for Cargo Tanks. After a series of public meetings and hearings and an extension of time for comment, the comment period closed on May 22, 1986. This rulemaking has produced significant controversy. DOT has received numerous comments many of which are substantial in scope. In evaluating these comments, identifying major issues, and trying to develop and evaluate alternatives for resolving these issues it became apparent that a number of major comments and alternative proposals from certain commentors were not adequately documented or supported and in some cases were not fully understood by DOT staff. Accordingly, during March and April, DOT held a series of public working meetings with these commentors to clarify the meaning of their comments and acquire additional data for evaluating the merits of various alternative proposals. Both the DOT staff and the industry representatives who participated in these meeting found them to be very productive. DOT staff is presently evaluating the information and data acquired in order to support further action on Docket Nos. HM-183, 183A. Our goal is to finalize as much of this docket as can be justified and if necessary reopen the docket on specific new proposals where the public has not had an opportunity to comment.

SENATOR LAUTENBERG: Your statement refers to a proposal or proposals that would require training for all persons involved in handling hazardous materials. Do you intend to initiate such a rulemaking in the near future?

ANSWER: RSPA personnel are currently drafting an ANPRM concerning training for persons involved in handling hazardous materials.

SENATOR LAUTENBERG: When do you expect to issue an ANPRM?

ANSWER: We expect to issue the ANPRM in June of this year.

HAZARDOUS MATERIALS ENFORCEMENT STATE REGULATIONS

SENATOR LAUTENBERG: You characterize your Cooperative Hazardous Materials Enforcement Development (COHMED) workshops as "very successful" and suggest that they promote "a better regulatory scheme and more uniformity." What data do you have to show that as a result of these meetings: (1) states are strengthening their hazardous materials enforcement and; (2) are applying the Hazardous Materials Transportation Act and Hazardous Materials Regulations in a more uniform manner?

ANSWER: While COHMED does not provide direct funding to the states, its objective, as was the case under SHMED, is to develop state interest in hazardous materials enforcement programs. As evidence that such objective is being met, there are now 43 states plus Puerto Rico actively participating in COHMED, an increase of 69%. The continuity provided by SHMED and COHMED has contributed to the fact that 50 states have now adopted Federal or comparable hazardous materials regulations.

Since most of the states have adopted the Federal regulations, uniformity as an enforcement issue primarily is focused on interpretation of the regulations, the level of penalties assessed when violations of regulations are discovered, and the procedure followed in conducting inspections. The free and open exchange of ideas and information, not only between the Federal and state personnel, but between personnel of different states has been an important feature of the COHMED program. Again, we do not have data that would provide an actual measure of our success in promoting uniformity in hazardous materials enforcement since this is a relatively new program. We recognize that we must expand our efforts in this area and this is a principal reason that RSPA has established the Federal/State and Private Sector Initiatives Division to focus on issues such as uniform enforcement.

RSPA plans to continue the COHMED program to maintain a continuing relationship with the states concerning hazardous materials matters.

OFFICE OF PIPELINE SAFETY
SAFETY GRANTS

SENATOR LAUTENBERG: You are requesting $5 million, an increase of $500,000, for the pipeline safety grant program. I have some questions about the way these grants are distributed.

As I understand it, 75% of the grant funds provide for a "primary allocation" to the states. This primary allocation is determined for a given state by limiting the amount it would be authorized to receive (i.e. 50% of its budget for pipeline enforcement) by a factor (i.e. 1% each $5,000 above $5,000 in a states "request") which is inversely related to the size of its program. In other words, the larger a state's commitment to pipeline safety enforcement the smaller the Federal primary allocation. The result is that for states like New Jersey that have a relatively large program, the Federal share of program costs is smaller. For example, for this fiscal year, New Jersey has a total program of $378,368. But its grant is only $114,289 or 30% of its total costs.

Why do you penalize states that are willing to support a larger program?

ANSWER: To increase the funding level for large State programs would reduce small State programs below a viable level and, in the worst case, result in program termination. Further, while a smaller State program, such as Delaware, does get 50 percent of its request, it receives $12,643, far less than a State such as New Jersey. In 1988 we expect our budget request for grants ($5,000,000) to cover an average 32 percent of all States' estimated program costs, an increase of 3 percent over the current appropriation ($4,500,000) which covers 29 percent of the States' estimated program expenses.

SENATOR LAUTENBERG: What is the rationale for this formula?

ANSWER: The rationale for our formula (75 percent relating inversely to program size and 25 percent relating to program performance factors) is to provide funds to assure that each State has an acceptable program. Prior to 1981, we funded all State programs to the statutory maximum allowed, 50 percent of each State agency's request. Since 1981, as requests have grown beyond available appropriated funds and as State programs have expanded, it was necessary to develop a refined allocation formula to equitably distribute the available funds. The formula funds relatively small programs to a level substantially close to 50 percent of total program cost, while also providing incentive (not necessarily 50 percent) funding in each State with a more extensive program. In 1985 the performance factors were added to encourage States, small or large, to improve the quality of the program. This formula was developed with the assistance of the States and is supported by the States. RSPA welcomes comments on a more equitable formula.

SAFETY GRANTS

SENATOR LAUTENBERG: The remaining 25% of the grant funds are intended as "incentive grants" to encourage States to bring their programs up to Federal standards. In allocating these funds, you assign a score to each State based on several factors presumably related to the quality of its enforcement program. The maximum score for incentive grants is 27 points. The factors include:

- State jurisdiction - 10 points
- Inspector qualifications - 3 points
- Number of inspectors - 2 points
- Number of inspection person days - 3 points
- Underground damage prevention - 4 points
- Attendance at Federal/State meetings - 5 points

Why do you regard attendance at Federal/State meetings as more important than the size, qualification, or activity level of a State's inspection force?

ANSWER: We believe that inspector qualifications (3 points), number of inspectors (2 points), and number of inspection person-days (3 points) are interrelated. When you consider these as an interrelated group, their point total is eight (8). The point total of these items, as a group, is greater than the five (5) points given for attendance at the Federal/State meetings. The formula does not regard attendance of this meeting as more important than size, qualification, or activity level of a State inspection force.

We do believe attendance at Federal/State meetings is very important. It provides an opportunity for State personnel to receive current views on the Federal/State Cooperative Pipeline Safety Program and to participate in discussion of important pipeline safety program, policy, and regulation issues. In addition, these meetings ensure uniform interpretation and enforcement of the regulations. Through exchanges at those meetings, RSPA and the States receive critical information on safety concerns, regulatory and enforcement problems, and develop working relationships that are critical to the Federal/State partnership.

SENATOR LAUTENBERG: What procedures do you have for assuring that States actually carry out the program they propose in their application for grant funds?

ANSWER: The Office of Pipeline Safety's Regional Chiefs conduct annual monitoring of the pipeline safety programs operated by State agencies to ensure that each program is being conducted in consonance with the agency's certification or agreement. The State agencies submit annual program descriptions with their grant applications and annual program performance reports with the year-end request for reimbursement. Copies of these documents are supplied to the Regional Chiefs for use in their annual monitoring visits to discuss the details of the State agencies' program plans and accomplishments. The Regional Chiefs evaluate the effectiveness and quality of program performance as well as the level of State agency expertise and initiative in operating an aggressive and productive inspection and enforcement program.

HAZARDOUS MATERIALS STATE INSPECTION

SENATOR LAUTENBERG: Last year you indicated that you did not know the number of state hazardous materials inspectors but that you intended to get this information at the cooperative Hazardous Materials Enforcement Development (COHMED) meetings planned for last spring. Do you now have that information? How many state hazardous materials inspectors are there? Please provide for the record a breakout of the end-year on-board-strength of state inspection forces by state.

ANSWER: While several states, such as Illinois, have a limited number of full-time hazardous materials inspection personnel, most states are using their commercial motor vehicle inspection personnel to conduct hazardous materials inspections.

In FY-86, the 35 states participating in the Motor Carrier Safety Assistance Program (MCSAP) spent 292 staff years conducting 534,795 inspections, which included 55,586 hazardous materials inspections. In FY-87, the 50 jurisdictions participating in MCSAP plan to spend 1,191 staff years conducting 1,157,590 inspections which will include 115,749 hazardous materials inspections. The substantial increase is due to more state enforcement programs shifting from a development phase to implementation along with increased staffing and trained inspectors.

Most states have one or more hazardous materials specialists working full time with their enforcement personnel in training and inspections. Some also conduct more specialized hazardous materials investigations than would be expected of general inspectors. We target these hazardous materials specialists for participation in RSPA's COHMED program since they are the key to the implementation of a uniform and effective nationwide hazardous materials enforcement program.

HAZARDOUS MATERIALS VIOLATIONS

SENATOR LAUTENBERG: For F.Y. 1986 and F.Y. 1987, provide a breakdown of hazardous materials violations reported by mode. How many of the reported violations resulted in legal sanctions or penalties?

ANSWER: As indicated previously, information reporting by the five modal administrations on hazardous materials enforcement activity, as collected by RSPA, includes only completed enforcement actions. The Coast Guard's information for F.Y. 1986 is not available, but the other four administrations closed 231 civil penalty cases.

SENATOR LAUTENBERG: What was the total amount of the fines imposed and what was the average for each case?

ANSWER: The following information summarizes F.Y. 1986 civil penalty actions, with the Coast Guard information not available:

Federal Aviation Administration - 54 cases - $386,082 - $7,150 average

Federal Highway Adminstration - 89 cases - $386,800 - $4,144 average

Federal Railroad Administration - 73 cases - $621,575 - $8,515 average

Research & Special Prog. Admin. - 15 cases - $ 79,163 - $5,278 average

Thus far in F.Y. 1987, the Federal Aviation Administration has closed 31 cases and collected $168,289 in penalties, with an average of $5,427 per case; the Federal Railroad Adminstration has closed 10 cases, collecting $126,450, an average of $12,645 per case; and RSPA has closed nine cases and collected penalties of $45,625, for an average of $5,069 per case. Figures for the Coast Guard and Federal Highway Administration for F.Y. 1987 were not available.

SENATOR LAUTENBERG: Also provide for the record a table displaying the disposition of reported violations for the last three fiscal years.

ANSWER: This information is not maintained by the modal administrations primarily because a reported violation has no significance under the civil penalty provisions of the Hazardous Materials Transportation Act. Only a violation determined to have been committed forms the basis for the assessment of a civil penalty, the collection of which closes the case.

ADMINISTRATIVE COSTS

SENATOR LAUTENBURG: You are estimating substantial increases in administrative costs for each of your offices, primarily for standard level user charges, communications and working capital fund charge. In every case, your justification says that "RSPA management is taking steps to curb and reduce these charges..."

Specifically, what measures have you implemented to reduce these costs?

ANSWER: The increase for Standard Level User Charges is the result of rate increases imposed on RSPA by GSA. We are in the process of realigning our office space to come in line with GSA guidelines for allowable square footage.

The increase in communications is based on the FY 1986 actuals. These actuals reflected only partial operating costs for the new telephone system. Thus, the increase in the FY 1988 costs represent the adjustment necessary to cover the estimated costs when compared to the FY 1987 allocation.

The increase in the working capital fund charges are due to rate changes which are the result of the pay raise and the new Federal Employees Retirement System. Also, additional costs are required to cover the security clearances for the new Hazardous Materials Program employees, and the GSA Rental Payments rate increases in OST for warehouse costs.

SENATOR LAUTENBURG: How much of a cost reduction have you achieved and how are these savings reflected in your request?

ANSWER: We do not anticipate any large savings in the FY 1988 time period. We hope to be able to show the results of these efforts, either through savings or holding-the-line in the FY 1989 budget request.

SUBCOMMITTEE RECESS

Senator LAUTENBERG. We are going to be scheduling our next hearing for April 23, 1987. That is for the subcommittee to hear from the Coast Guard.

With that, this meeting is adjourned.

[Whereupon, at approximately 12:03 p.m., Thursday, April 9, the subcommittee was recessed, to reconvene at 10 a.m., Thursday, April 23.]

DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1988

THURSDAY, APRIL 23, 1987

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room SD-138, Dirksen Senate Office Building, the Hon. Frank R. Lautenberg (chairman) presiding.

Present: Senators Lautenberg and D'Amato.

DEPARTMENT OF TRANSPORTATION

U.S. COAST GUARD

STATEMENT OF ADM. PAUL A. YOST, JR., COMMANDANT

ACCOMPANIED BY:
- **REAR ADM. CLYDE T. LUSK, CHIEF OF STAFF**
- **CAPT. KENT H. WILLIAMS, CHIEF, PROGRAMS DIVISION**
- **CAPT. MICHAEL O. MURTAGH, CHIEF, BUDGET DIVISION**

OPENING REMARKS OF SENATOR D'AMATO

Senator D'AMATO. The chairman is at another hearing. He will be here shortly. For the purposes of moving forward I am going to waive any opening statement that I might have. But I would like to put into the record special tribute to a very special person.

Pat Cregan has been on the Senate Appropriations Committee for some 6 years. She has been on the committee staff, Transportation Subcommittee, since 1983. Pat served with distinction as majority clerk for the committee, and she now serves with great distinction as the minority clerk.

We are going to miss her. She is retiring at the end of this week. And as the ranking member of the Transportation Committee it has been indeed a pleasure for me to have had the opportunity of working with Pat. Sometimes I think I work for her, as those of us know, staff plays an integral if not totally indispensible part in the operation of the Congress and particularly the committees.

This is a committee in which we pride ourselves with the great professionalism. Republicans and Democrats on both sides are indeed fortunate to have the Pat Cregan's of the world and the kind of staff that we have had. Pat leaves us. We are going to miss her. We certainly understand her movement into the private sector that affords much more in the way of opportunity, not to mention the pay.

Pat, you are not Hatched. You are not in political activity, now it can become part of your life. So we will call upon you from time to time and certainly for your expertise. But we are going to miss you, and I thought it would be appropriate to put that in the record and I have a full statement with respect to this very special lady.

Admiral Yost, you have been waiting very patiently. Let me say that our respect for you personally, for your leadership, is unbounded. There is no one who can question the devotion, the leadership, the loyalty, the dedication that you bring to the Coast Guard.

And the fact is that you have helped instill, continue to instill a great tradition in spirit, and notwithstanding that the Coast Guard has had to go through some rather difficult times as a result of budget constraints last year, and what we are looking forward to this year, notwithstanding the new and very awesome responsibilities as it relates to utilization of Coast Guard and personnel in the battle against drugs.

The coordination of this effort with other federal agencies is not an easy task. Anyone who thinks that it is should simply look at the historic difficulties with respect to various law enforcement agencies within the federal bureaucracy themselves and understand that it is not going to be such an easy matter to bring about the institutions in terms of their cooperation, Coast Guard and other law enforcement offices to really bring about an effective fighting machine as it relates to the war on drugs in particular.

And so while we understand this I think we have to continually be striving to minimize the differences and to build on the strengths and the successes. And there have been successes that have been undertaken in this area.

I would hope that at a future time, and not at a public hearing, we would have the opportunity to sit down to review some of those successes and to look forward to the future as to how we can build on it.

Admiral, if you would proceed then I am going to dispense with any further introduction.

INTRODUCTION OF ASSOCIATES

Admiral YOST. Thank you very much, Mr. Chairman. Let me join with you in praise of Pat Cregan. We have seen her career move very, very rapidly, and now in her midtwenties she is retiring. It is hard to believe.

I am pleased to have this opportunity to meet with you and the other distinguished members of this subcommittee to review and discuss the Coast Guard's fiscal year 1988 budget request. I have appeared before this committee in other capacities. This, however, is my first appearance as Commandant to present appropriately my first budget request.

Accompanying me today are my Chief of Staff, Rear Adm. Clyde Lusk, on my far right; Chief of the Program Division, Capt. Kent Williams, on my immediate right; and the Chief of the Budget Division, Capt. Mike Murtagh, on my immediate left.

STATEMENT SUMMARY

I would like to summarize my statement and then submit the statement for the record. In summary let me say at my nomination hearing last May I stated my belief that drug interdiction, military readiness, maritime safety, and fiscal responsibility were among the Coast Guard's top priorities.

I indicated that our major objectives would include balancing these requirements to provide a well-equipped, well-trained force augmented by a Coast Guard Reserve, ready to help us perform our wartime tasks. I also indicated that I was committed to the principle that the Coast Guard must be treated as our fifth armed force.

To summarize our budget totals, let me say the Coast Guard's fiscal year 1988 request of $2.739 billion includes modest increases primarily in our operating expense appropriation. These are necessary to fund follow-on costs of operating facilities acquired through recent capital investments.

Much of the increase is the result of bookkeeping changes that return to the Coast Guard funding base programs that were temporarily reimbursed by DOD last year. This request, while fully reflecting the national policy to limit the growth in federal spending, will still support top priority programs benefiting the American public. These are drug interdiction, military readiness, and maritime safety.

And I ask your support of this budget as presented. That completes my statement, Mr. Chairman.

PREPARED STATEMENT

Senator D'AMATO. Thank you, Admiral Yost. We will make your complete statement part of the Record.

[The statement follows:]

STATEMENT OF ADM. PAUL A. YOST, JR.

GOOD MORNING, MR. CHAIRMAN. I AM PLEASED TO HAVE THIS OPPORTUNITY TO MEET WITH YOU AND THE OTHER DISTINGUISHED MEMBERS OF THIS SUBCOMMITTEE TO REVIEW AND DISCUSS THE COAST GUARD FISCAL YEAR 1988 BUDGET REQUEST. I HAVE APPEARED BEFORE THIS SUBCOMMITTEE IN OTHER CAPACITIES. THIS, HOWEVER, IS MY FIRST APPEARANCE AS COMMANDANT TO PRESENT, APPROPRIATELY, MY FIRST BUDGET REQUEST.

ACCOMPANYING ME TODAY ARE THE VICE COMMANDANT, VICE ADMIRAL JAMES IRWIN; MY CHIEF OF STAFF, REAR ADMIRAL CLYDE LUSK; THE CHIEF OF THE PROGRAMS DIVISION, CAPTAIN KENT WILLIAMS; AND THE CHIEF OF THE BUDGET DIVISION, CAPTAIN MIKE MURTAGH.

AT MY NOMINATION HEARING LAST MAY, I STATED MY BELIEF THAT DRUG INTERDICTION, MILITARY PREPAREDNESS, MARITIME SAFETY AND FINANCIAL RESPONSIBILITY WERE AMONG THE COAST GUARD'S TOP PRIORITIES. I INDICATED THAT OUR MAJOR OBJECTIVES WOULD INCLUDE BALANCING THESE REQUIREMENTS TO PROVIDE A WELL-EQUIPPED, WELL-TRAINED FORCE AUGMENTED BY A COAST GUARD RESERVE READY TO HELP US PERFORM OUR WARTIME TASKS. I ALSO INDICATED THAT I WAS COMMITTED TO THE PRINCIPLE THAT THE COAST GUARD MUST BE TREATED AS OUR FIFTH ARMED FORCE.

THE BUDGET YOU NOW HAVE BEFORE YOU FOR CONSIDERATION REFLECTS THOSE VIEWS.

BUDGET TOTALS

TOTAL BUDGET AUTHORITY REQUESTED IS $2,739 MILLION. OVER 70% OF THIS AMOUNT, $1,934.8 MILLION PLUS AN ADDITIONAL $30 MILLION PROPOSED FOR TRANSFER FROM OUR BOAT SAFETY ACCOUNT, IS FOR OPERATING EXPENSES. THIS APPROPRIATION PROVIDES FOR SALARIES AND EXPENSES OF MOST OF OUR PERSONNEL AND FUNDING FOR THE

OPERATION AND MAINTENANCE OF COAST GUARD SHIPS, AIRCRAFT, AND SHORE UNITS, INCLUDING FACILITIES RECENTLY ACQUIRED THROUGH CAPITAL INVESTMENTS IN PREVIOUS YEARS. $277.9 MILLION IS REQUESTED TO FUND CAPITAL IMPROVEMENTS, INCLUDING CUTTER ACQUISITIONS, RENOVATIONS AND MODERNIZATIONS; AND REPLACEMENT AND RENOVATION PROGRAMS AT SELECTED SHORE FACILITIES. TO ACHIEVE A SELECTED RESERVE STRENGTH OF 13,500 MEMBERS, $69.1 MILLION IS REQUESTED. THE $20.1 MILLION REQUESTED FOR RESEARCH AND DEVELOPMENT WILL FUND THE DEVELOPMENT OF TECHNIQUES, METHODS, HARDWARE, AND SYSTEMS THAT DIRECTLY CONTRIBUTE TO INCREASING THE PRODUCTIVITY AND EFFECTIVENESS OF COAST GUARD OPERATING FORCES. $15 MILLION IS BEING REQUESTED FOR BOAT SAFETY GRANTS WHICH PROVIDE FINANCIAL ASSISTANCE TO STATES FOR THE DEVELOPMENT AND IMPLEMENTATION OF A COORDINATED NATIONAL RECREATIONAL BOATING SAFETY PROGRAM.

$386.7 MILLION IS REQUESTED TO FUND OUR RETIRED PAY ACCOUNT, WHICH PROVIDES ANNUITIES AND MEDICAL COSTS FOR MILITARY RETIRED PERSONNEL, THEIR DEPENDENTS, AND SURVIVORS. ALSO, $5.3 MILLION IS REQUESTED FOR OUR OIL POLLUTION FUND PENDING ENACTMENT OF OIL SPILL LIABILITY AND COMPENSATION LEGISLATION WHICH WE NEED SO BADLY AND WHICH SECRETARY DOLE STRONGLY SUPPORTS.

THE REQUEST SUPPORTS A LEVEL OF 39,042 MILITARY AND 5,793 CIVILIAN POSITIONS.

OUR BUDGET REQUEST AGAIN CONTAINS ESTIMATES OF USER FEE COLLECTIONS FROM BENEFICIARIES OF COAST GUARD SERVICES NOT DIRECTLY INVOLVING EMERGENCY ASSISTANCE, LAW ENFORCEMENT OR MILITARY READINESS.

APPLICATION OF RESOURCES

DRUG INTERDICTION

OUR BUDGET ANNUALIZES THE RESOURCES TO CONTINUE THE DRUG INTERDICTION INITIATIVES FIRST FUNDED IN FISCAL YEAR 1987. ONE

OF THESE INITIATIVES INCLUDES OPERATING TWO E-2C AIRBORNE EARLY WARNING AIRCRAFT, TRANSFERRED FROM THE NAVY, TO DETECT AIR SMUGGLING. IN ADDITION, COAST GUARD HU-25A FALCON JETS ARE NOW BEING EMPLOYED TO INTERCEPT AND TRACK SUSPECT AIRCRAFT AND WILL BE RECONFIGURED WITH NEW SENSORS TO MAKE THEM EVEN MORE EFFECTIVE. WE WILL ALSO JOINTLY STAFF AND OPERATE A COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE CENTER (C3I), UNDER CONSTRUCTION, WITH THE U.S. CUSTOMS SERVICE TO COORDINATE AIR INTERDICTION OPERATIONS IN THE SOUTHEAST U.S. NEW SECURE COMMUNICATIONS EQUIPMENT THAT WILL ENHANCE OPERATIONAL EFFECTIVENESS FOR ALL ASPECTS OF DRUG INTERDICTION IS BEING BOUGHT AND INSTALLED ABOARD MANY OF OUR BOATS, CUTTERS, AND PLANES.

WE PROPOSE TO CONTINUE OUR LAW ENFORCEMENT DETACHMENT (LEDET) PROGRAM. AS A PART OF THIS PROGRAM, COAST GUARD TEAMS EMBARK ON U.S. NAVY VESSELS TRANSITING DRUG INTERDICTION WATERS, PROVIDING TRAINED PERSONNEL AND LEGAL AUTHORITY TO BOARD SUSPECT VESSELS. WHILE ASHORE BETWEEN DEPLOYMENTS, LEDET PERSONNEL AUGMENT COAST GUARD BOAT STATIONS, INCREASING THEIR LAW ENFORCEMENT CAPABILITIES. ORIGINALLY, THIS PROGRAM WAS ESTABLISHED AS A DOD REIMBURSABLE PROGRAM. THIS BUDGET PROPOSES THE TRANSFER OF THE NECESSARY FUNDING TO THE COAST GUARD.

OUR DRUG ENFORCEMENT EFFORTS WILL BE FURTHER ENHANCED BY OUR ACQUISITION OF NEW CAPITAL ASSETS AND THE INCREASED CAPABILITIES OF OUR EXISTING CAPITAL ASSETS. FOR EXAMPLE, BY THE BEGINNING OF FY 1988, THE FIRST 16 OF OUR ISLAND CLASS 110-FOOT PATROL BOATS WILL BE DELIVERED AND OPERATIONAL. IN ADDITION, A CONTRACT FOR CONSTRUCTION OF ANOTHER TWENTY-ONE PATROL BOATS WAS JUST AWARDED ON FEBRUARY 11TH. ALSO, BY THE END OF FY 1988, ELEVEN OF THE THIRTEEN 270-FOOT MEDIUM ENDURANCE CLASS CUTTERS WILL BE OPERATIONAL OR DELIVERED, ALL OF THE NINETY-SIX HH-65A SHORT RANGE RECOVERY HELICOPTERS WILL HAVE BEEN ACCEPTED, AS WELL AS

THREE NEW HC-130 LONG RANGE SURVEILLANCE FIXED-WING AIRCRAFT. FIVE OF THIRTY-SIX SURFACE SEARCH RADARS (FLARS) FOR THE HC-130 WILL BE DELIVERED AND SIX AIRBORNE SURVEILLANCE SYSTEMS (AIREYE) WILL BE IN OPERATIONAL USE ON HH-25A MEDIUM RANGE SEARCH AIRCRAFT. FURTHER, BY THE BEGINNING OF FY 1988 WE WILL HAVE ONE FULLY OPERATIONAL SEA-BASED AEROSTAT SURVEILLANCE SYSTEM TO ENHANCE OUR DRUG INTERDICTION MISSION AND DEPENDING ON DELIVERY SCHEDULES AS MANY AS FOUR MORE BY THE END OF THE FISCAL YEAR.

IN ADDITION, SIGNIFICANT PROGRESS IS BEING REALIZED IN THE RENOVATION, MODERNIZATION AND SERVICE LIFE EXTENSION REHABILITATIONS OF OUR 378-FOOT AND 210-FOOT MAJOR CUTTER CLASSES. ALTHOUGH MOST OF OUR CAPITAL ASSETS ARE MULTI-MISSION IN NATURE, ALL OF THEM PLAY A PRIMARY ROLE IN OUR DRUG INTERDICTION MISSION.

MILITARY PREPAREDNESS

PRESIDENT REAGAN'S JANUARY 1987 "NATIONAL SECURITY STRATEGY OF THE UNITED STATES" CONTAINS THIS STATEMENT: THE UNITED STATES MUST MAINTAIN EFFECTIVE AND ROBUST RESERVE AND NATIONAL GUARD FORCES, TRAINED AND EQUIPPED AT LEVELS COMMENSURATE WITH THEIR WARTIME MISSIONS, AS WELL AS COAST GUARD AND OTHER CAPABILITIES WHICH SUPPORT THE NATIONAL SECURITY ESTABLISHMENT.

OUR FY 1988 BUDGET REQUEST SUPPORTS THIS POLICY. I HAVE ALREADY DESCRIBED SOME OF OUR CAPITAL ASSETS IN TERMS OF THEIR CONTRIBUTION TO OUR LAW ENFORCEMENT EFFORTS. THEY WILL ALSO ADD...EQUALLY AND SIGNIFICANTLY...TO OUR MILITARY READINESS POSTURE. I HAVE ALREADY MENTIONED THAT WE ARE PROPOSING FUNDS TO INCREASE OUR SELECTED RESERVE TO A NEW STRENGTH OF 13,500. OUR BUDGET ALSO PROPOSES RESTORING TO THE COAST GUARD RESOURCES FOR OPERATIONS AND TRAINING RELATED TO OUR DEFENSE AND MILITARY READINESS MISSIONS. IN FY 1987 CONGRESS PROVIDED FOR FUNDING OF THESE RESOURCES ON A REIMBURSABLE BASIS BY DOD.

THIS BUDGET ALSO CONTAINS AN INITIATIVE TO ENHANCE EXISTING PORT SECURITY CAPABILITIES WHILE BROADENING THE SCOPE TO INCLUDE ANTI-TERRORISM ACTIVITIES. THIS SHIFT TO INCLUDE A FOCUS ON TERRORISM PREVENTION RECOGNIZES OUR NEWLY EXPANDED RESPONSIBILITIES FOR PORT SECURITY WHILE SIMULTANEOUSLY INCREASING OUR ABILITY TO MOBILIZE IN THE EVENT THE MARITIME DEFENSE ZONES ARE ACTIVATED.

MARITIME SAFETY

WE HAVE ALWAYS ALLOCATED A SIGNIFICANT PORTION OF OUR BUDGET BASE FOR MARINE SAFETY PROGRAMS...SEARCH AND RESCUE PROGRAM COSTS ALONE EXCEED ONE-THIRD OF A BILLION DOLLARS. THIS BUDGET CONTINUES SUPPORT FOR THIS ESSENTIAL MISSION AREA AND INCLUDES FOLLOW-ON FUNDING FOR OPERATING A NEW AIR FACILITY AND TO PROVIDE FOR PHASE III OF OUR RESCUE SWIMMER PROGRAM. IT WILL ALSO FUND FOLLOW-ON MAINTENANCE COSTS OF WATERWAYS AIDS-TO-NAVIGATION PROJECTS FUNDED IN PREVIOUS BUDGETS. IN ADDITION, RESOURCES ARE BEING REQUESTED TO UPGRADE AUXILIARY TRAINING AND ADMINISTRATION. THE AUXILIARY IS ONE OF THE MOST COST-EFFECTIVE ORGANIZATIONS OF ITS KIND...IN FY 1985 IT WAS RESPONSIBLE FOR SAVING 472 LIVES AND SOME $185 MILLION IN PROPERTY.

OUR BUDGET ALSO ADDRESSES THE SAFETY OF OUR OWN PERSONNEL BY REQUESTING FUNDS FOR DIVING DECOMPRESSION CHAMBERS AND BOAT CREW SURVIVAL EQUIPMENT.

FINANCIAL RESPONSIBILITY

THERE ARE A NUMBER OF ITEMS INCLUDED IN OUR BUDGET THAT REFLECT REDUCTIONS BECAUSE OF SAVINGS REALIZED OR EXPECTED TO BE REALIZED. SOME OF THESE ITEMS HAVE BEEN INCLUDED BEFORE, SUCH AS OUR SOLAR AIDS-TO-NAVIGATION COST AVOIDANCE RESULTING FROM THE CONVERSION OF BATTERY-POWERED AIDS-TO-NAVIGATION TO SOLAR POWER, THE LIGHTHOUSE AUTOMATION PROGRAM PERSONNEL REDUCTIONS, AND REDUCTIONS TO BE TAKEN UNDER OMB CIRCULAR A-76.

OTHER ITEMS REFLECT INCREASES BUT SHOULD RESULT IN LONG-TERM ECONOMIES OR COSTS TO BE AVOIDED THROUGH INCREASED EFFICIENCY AND EFFECTIVENESS. EXAMPLES OF THESE INCLUDE FOLLOW-ON FUNDING FOR OUR DISTRIBUTED COMPUTER SYSTEM, VESSEL LOGISTICS SUPPORT, AND LOGISTICS SUPPORT FOR OUR NEW AIRCRAFT.

THE COAST GUARD BUDGET AGAIN THIS YEAR ANTICIPATES COLLECTION OF USER FEES. FEES FOR DIRECT SERVICES INVOLVING A TRANSACTION (E.G., ISSUING LICENSES) WOULD BE SET TO RECOVER THE COST TO THE COAST GUARD OF PROVIDING THE SPECIFIC SERVICE. FEES FOR OTHER SERVICES WOULD BE SET IN PROPORTION TO THE COAST GUARD'S COST OF PROVIDING THE AVAILABILITY OF THE SERVICES TO EACH CLASS OF USERS - RECREATIONAL, COMMERCIAL FISHING, DEEP-SEA COMMERCIAL, AND INLAND COMMERCIAL. IT IS ANTICIPATED THAT SUCH FEES WOULD YIELD APPROXIMATELY $355 MILLION IN FY 1988 AND $474 MILLION PER YEAR THEREAFTER. THE COST OF COAST GUARD PROGRAMS THAT BENEFIT THE GENERAL PUBLIC (E.G., DEFENSE PREPAREDNESS, LAW ENFORCEMENT, AND POLAR ICE OPERATIONS) WOULD NOT BE INCLUDED IN THE USER FEES BECAUSE THEY ARE CORE FUNCTIONS OF GOVERNMENT THAT BENEFIT ALL TAXPAYERS. I AM A FIRM BELIEVER IN THE PRINCIPLE OF USER FEES AND URGE YOUR SUPPORT FOR THE ADMINISTRATION'S FORTHCOMING LEGISLATIVE PROPOSAL.

SUMMARY

THE COAST GUARD'S FY 1988 REQUEST OF $2,739 MILLION INCLUDES MODEST INCREASES PRIMARILY IN OUR OPERATING EXPENSES APPROPRIATION, WHICH ARE NECESSARY TO FUND FOLLOW-ON COSTS OF OPERATING FACILITIES ACQUIRED THROUGH RECENT CAPITAL INVESTMENTS. MUCH OF THE INCREASE IS THE RESULT OF BOOKKEEPING CHANGES THAT RETURN TO THE COAST GUARD FUNDING BASE PROGRAMS THAT WERE TEMPORARILY REIMBURSED BY DOD LAST YEAR. THIS REQUEST, WHILE FULLY REFLECTING THE NATIONAL POLICY TO LIMIT THE GROWTH IN FEDERAL SPENDING, WILL STILL SUPPORT TOP PRIORITY PROGRAMS BENEFITTING THE AMERICAN PUBLIC - DRUG INTERDICTION, MILITARY PREPAREDNESS, AND MARITIME SAFETY. I ASK YOUR SUPPORT OF THIS BUDGET AS PRESENTED.

FUNDING FREEZE

Senator D'AMATO. Admiral, as you are probably aware the Congress will struggle with the budget resolutions over the next several weeks and we will be fortunate if the total spending for transportation is merely frozen, rather than cut from last year.

In the event your funding level is frozen, please outline your contingency plans, especially as regards the drug effort. Let me put it another way. What does this do to your ability to carry out your mandate in this area?

Admiral YOST. The Coast Guard budget, about 25 percent of that total budget, is tied up and connected to our drug interdiction programs. So to take any kind of a massive cut would have to affect our ability to continue our top priority, which is drug interdiction.

Senator D'AMATO. Let us look at it this way. I think it is important for the record, to get this down in the record. A spending freeze, in most cases, that obviously for the various agencies, would be difficult, because of inflation, various costs that go up, salaries, et cetera.

But as it relates to the Coast Guard you have a very unique circumstance. For the record, I think it is important, by the way that circumstance comes about as a result of a very significant amount of dollars being allocated to you, a one-term situation, from the Defense Department.

Would you go through with this committee and for the record outline why a freeze would not be a freeze in the ordinary sense, but would be a very substantial cut and then tell us how much of a cut that would be?

Admiral YOST. Yes; last year outside of the function 400 budget that this committee has oversight of, in our budget was $15 million out of the Department of Defense budget for law enforcement attachments. Also, $39 million was added to our budget by the drug omnibus bill, and $75 million was added to our operating expense budget last year out of DOD. Those totaled to $129 million.

A freeze then at last year's level would start us $129 million in operating expenses underneath where we were last year, and that would be a major, major problem.

Senator D'AMATO. So $129 million basically, in dollars that go to operation, $15 million for manpower for law enforcement, $39 million for drug operations, $75 million for operating expenses, it is not a question of a one-term purchase of equipment.

Admiral YOST. No; those are all operating costs that are annualized, have to be annualized in this budget. Also there was a $30 million supplemental for pay, and add the $30 million that would not be in this freeze number would give us $159 million below last year's budget. That is not a freeze, that is amassive cut.

Senator D'AMATO. Let me ask you percentagewise, what is your total budget? What would this $159 million, what percent would that be, in terms of reduction?

Admiral YOST. It would be a little over 10 percent of our OE budget. The OE budget is $1.9 billion. This would be a $0.16 billion cut.

Senator D'AMATO. So it is an 8-percent cut.

Admiral YOST. It is 8 percent.

LAW ENFORCEMENT DETACHMENT PROGRAM

Senator D'AMATO. Let me ask you in terms of your drug enforcement effort as it relates to the expenditure of the $15 million and the personnel that was intended to be brought aboard. How many of those personnel do you have on board now?

Admiral YOST. We have 300 on board now, and we find that 300 is sufficient to do the job that the money was budgeted for. We can always use more people, but not in that program. Three hundred gives us all we need to man the Navy ships that we have available to us.

Senator D'AMATO. How many are actually deployed of those 300?

Admiral YOST. I would have to provide that for the record. These people are stationed at various Coast Guard stations up and down the coast, and when a Navy ship becomes available they are then sent out on temporary duty to the Navy ship for the duration of the deployment.

So at times when there are lots of Navy ships at sea the deployment rate is high, and vice versa.

PERSONNEL DEPLOYED

Senator D'AMATO. Last year Admiral Gracey and I discussed the delay in assigning Coast Guard personnel to the Navy surface vessels.

Now the law mandated a 500-position level. It became clear last year we were not going to meet that. The fiscal year 1988, the President's budget again is characterized as containing the $15 million.

Let me ask you, you are telling me that you do not need 500 people to undertake the drug effort?

Admiral YOST. No; these people were much more definitized than that. They were to form law enforcement attachments on Navy vessels at sea. When the Navy has a vessel at sea that is in an area of interest, they call us and say we have this vessel going to sea for a particular duration. Can you send a law enforcement detachment?

Our answer is yes, and we send one. What I am saying is 300 provides all of the people that we need to man every Navy ship that is in a position of interest for us for this responsibility.

Senator D'AMATO. It is interesting. Let us update the figures provided last year. Last year how many deployments did you finally have and how many do you have now? Last year I saw only five positions actually deployed on random dates in 1986.

Admiral YOST. Let me ask Capt. Kent Williams to answer that.

Captain WILLIAMS. Good morning, Mr. Chairman. Last year we had 69 deployments in the Atlantic for 880 days. Now that is not just one person, but that is a team out there. In the Pacific we did 25 for 364 days.

This year we only have first quarter statistics in but so far in the Atlantic we have done 26, almost half of what we did last year.

Senator D'AMATO. Twenty-six deployments means that at any one time a team has come on, right?

Captain WILLIAMS. Yes, sir.

Senator D'AMATO. It may be the same ship, but two or three different occasions.

Captain WILLIAMS. Yes, sir; for 233 days also we have been out there in the first quarter already.

Senator D'AMATO. Well, it means a ship has been out there. It does not mean that 26 ships have been out there for that period of time. Let us be a little precise with statistics, because when I hear 800 days I have to divide that by the number of ships.

Captain WILLIAMS. That is the number of ship days, sir. That is exactly days at sea. But there could be 12 or 15 or 7 people associated with each of those days also.

Senator D'AMATO. Yes.

Captain WILLIAMS. So we are on a pace that is almost double of what we did last year.

LAW ENFORCEMENT DETACHMENT SEIZURES

Senator D'AMATO. OK. What drug seizures have resulted?

Admiral YOST. Maybe I ought to provide that for the record, because it is a full page of drug seizures by date, by drug, number of pounds of marijuana.

Senator D'AMATO. Do you have it as it relates to this particular function?

Admiral YOST. Yes; it is all for this function. Eighty-seven arrests, 539 pounds of cocaine, 182,000 pounds of marijuana, and 15 vessels seized by law enforcement detachments on Navy vessels during these deployments at sea.

E-2C OPERATIONS

Senator D'AMATO. Good. The Coast Guard and Customs were each assigned two E-2C aircraft for drug interdiction. How is the Coast Guard using this addition to the aircraft fleet?

Admiral YOST. It is a very welcome addition to the fleet. We have stood the unit up, that is the unit is operational. It is about a 70-man unit. There has been multiple deployments of these E-2C's into the Caribbean. Let me get you some figures on that if I can here.

The first operation was between December 15 and 19. They found 19 targets. Twelve of the targets were immediately sorted out as legitimate targets and were not further tracked. Seven were intercepted by a Coast Guard Falcon aircraft directed in by the E-2C. One was intercepted by one of our Coast Guard 130's.

The results of that, an HU-25 assisted in a case off Bimini, where a suspect aircraft finally crashed. Another HU-25 or Falcon relayed the Customs Service citation surveillance of a suspected aircraft that was airdropping contraband.

In the second operation which went from January 20 to February 15, approximately 50 targets were reported, 40 were tracked, 20 were intercepted by a Coast Guard Falcon aircraft. We seized one aircraft, one drug aircraft on Cat Island.

On February 23 through 28 we tracked 45 targets, 45 targets were reported, 40 were tracked, 30 were intercepted by a Falcon aircraft. We had a second Cat Island case, which resulted in 528 pounds of cocaine seized and four arrests.

The fourth operation was March 26 through April 1. Approximately 30 targets were reported, 20 were tracked, 11 were intercepted and that is the last information that I have. The aircraft have been on line for 2 months. Excuse me, we got them on line in 2 months. We got the money in late October. We had the units stood up by January.

E-2C DEPLOYMENT

Senator D'AMATO. Admiral, I see that you have one operation from the 15th to the 19th of December. You testified that there was another operation that went from January 20 till February 15. Is that right?

Admiral YOST. Yes.

Senator D'AMATO. Third operation went from March 23 till March 28?

Admiral YOST. February 23 to February 28.

Senator D'AMATO. Twenty-three?

Admiral YOST. Yes; February 23 to February 28.

Senator D'AMATO. February 28?

Admiral YOST. Yes; and then March 26 to April 1.

Senator D'AMATO. My question is, why is it that there seems to appear to be major gaps, that the plane is down more than it is up.

Admiral YOST. Yes; there are only two places in the United States that these planes can be supported on shore. We are supporting these at one of those, which is at a naval air station in Norfolk. Norfolk is not centrally located for a 5-hour airplane to operate in the Caribbean.

So we must deploy these two aircraft with whatever spare parts and mechanics we can take with us into the Caribbean, either out of Clearwater or Roosevelt Roads or Key West, for a week or two at a time.

Then we bring them back to their base, do the maintenance on them, do the training on them and get them ready for the next deployment.

Senator D'AMATO. Let me ask you this. It would seem to me that if you are going to get some maximum utilization of the plane, and keep it flying, because of you not flying it is still there, essentially there, with the exception of the fuel, that we should attempt to get another operational base, where we do not have to pull out of service for 2 weeks at a time.

Admiral YOST. I agree. We are doing that. We are planning an operational base in Clearwater.

Senator D'AMATO. Are we having any difficulties on the political side?

Admiral Yost. None at all.

Senator D'Amato. You know what I am talking about. None of us want the base to leave.

Admiral Yost. No; there has been no problem at all. Two E-2C's coming out of Norfolk is a drop in a bucket. They would not even miss it.

One of the problems is the infrastructure to support those aircraft. The cost is somewhere around $19 million——

Senator D'Amato. $19 million?

Admiral Yost. $19 million to put in the infrastructure just to start these airplanes and operate them out of——

Senator D'Amato. A couple of good drug seizures, you pay for it.

Admiral Yost. That is right. Yes.

Senator D'Amato. How about Homestead? Could that support those aircraft?

Admiral Yost. Well, Homestead is fairly crowded right now. Whether there is hangar space there, we have not looked. But we would want them, if we could, as close to the source as we can get them and have the infrastructure.

Senator D'Amato. But Homestead is getting closer.

Admiral Yost. It is closer.

Senator D'Amato. And our question is you having to get $19 million in a budget that is frozen, and we are going to have difficulty doing that, are we not?

Admiral Yost. We are.

Senator D'Amato. OK. Rather than to proceed with an operation that is maybe employing at 40 or 50 percent efficiency, in terms of what you could probably provide, it would seem to me that, No. 1, it would be a good investment, whether it is $17 million or $19 million, if these missions are worthwhile, which I think they are.

And No. 2, that Homestead certainly as an interim, should be explored. Will you be exploring that?

Admiral Yost. We will explore Homestead. The cost that I quoted was for spare parts and equipment to start the engines, test the equipment and what have you. It is not for the hangars, the fueling, the washdowns, the runways. And if those are not available at Homestead, that really gets into a lot of money.

Senator D'Amato. I wonder if we can find out if they are available.

Admiral Yost. We certainly will look into that. I am sure we have, but let me just say if we have not we certainly will.

Senator D'Amato. OK. Would you report to the committee and let us know what your findings are as it relates to Homestead so we can get some better utilization?

Admiral Yost. Yes, we will.

COAST GUARD/CUSTOMS COOPERATION

Senator D'AMATO. Have you been working with Customs, as it relates to their use of their E–2C's, to determine their extent and to maximize your efficiency of utilization of yours plus theirs?

Admiral YOST. We have consulted with them. They are operating their two aircraft out of the only other shore station in the world that you can operate them out of, which is Miramar. It is on the west coast.

So their operation is a continent away from us. They have the two aircraft.

Senator D'AMATO. They do not have quite the operational problem then, I would imagine, that you have, operating from Norfolk. They are closer to the——

Admiral YOST. Well, their aircraft are supposed to be operating over the Southwest border, the border with Mexico. It is a land border that is not a lot closer, but somewhat closer, well it is closer, to the operation.

They are having some mechanical problems and wing crack problems with their aircraft, and I think they are slightly behind us, somewhat behind us in the learning curve and the training curve of their pilots and what have you.

Senator D'AMATO. Do you conduct any joint training missions?

Admiral YOST. No; because they are on the west coast, we are on the east coast. We have a 5-hour airplane. If both of them flew toward each other they probably could not reach each other.

Senator D'AMATO. Do you think that you might have certain expertise in this area that they lack in terms of training? Do not be modest.

Admiral YOST. Well, I think that we are the premier maritime aircraft operators in the world.

Senator D'AMATO. Might it not behoove both services if you were to attempt to work out a schedule for some training together?

Admiral YOST. It would cause us to take our aircraft across country to do that.

Senator D'AMATO. Well, even if it were to send some of your personnel over to the other side to work with them. You know, there are different ways of getting them. We could even put them on a train, an Amtrak. I do not know if it goes over there, but you know.

Admiral YOST. Well, we have sold Conrail, you know.

Senator D'AMATO. Admiral, we have got different ways of doing these things. You do not have to bring the same plane that they are going to fly, you know, or your people do not have to do that.

But if it is the same E–2C they can go over there and work with them out of their Miramar base. Would you not think that that might foster some coming together, you know, like we can show you some techniques, fellows. After all, we are the premier service and we would like to share with you.

Admiral YOST. That is a very good idea. We will do that, sir. We will offer that. We are planning to work in the Caribbean, they have thought of bringing their planes into the Caribbean.

Senator D'AMATO. Well, just some of the missions, and then you might have some of their pilots come on over to your E–2C's that you are flying, and they might fly in your planes. And then you could send some of your experienced people and what not on over there to Miramar. Is that tough?

Admiral YOST. It is not tough. It is an excellent idea. I am embarrassed I have not thought about it. I will do it.

GOVERNOR'S ISLAND DRUG TASK FORCES

Senator D'AMATO. Great. I have some questions that I am going to submit to the record, because I do not want to be parochial and bring up Governor's Island and the headquarters there and what not. It would be assumed that, after I come from New York and Senators from New York have a tradition of being much more globally oriented.

Admiral YOST. I have noticed that, sir.

Senator D'AMATO. So I will not be parochial for the record. But I am pleased to see that you are moving ahead in that area.

Are any drug task forces headquartered at Governor's Island?

Admiral YOST. Yes; the Command that is in charge of all of the drug operations overall in the Atlantic, Gulf of Mexico, and the Caribbean is headquartered at Governor's Island. The commander of the Atlantic area is Vice Admiral Thompson.

Senator D'AMATO. I was going to ask you the next question, how many billets do you have there? But you can answer that for the record.

Admiral YOST. Thank you.

Senator D'AMATO. Let me simply say this if I might, I would ask the permission of the Chair to submit some questions for the record to save time.

ADVERSE EFFECT OF BUDGET CUTS

I do not believe that we in good faith can permit the cut, the drastic cut that would take place to the Coast Guard service. I think that it would be absolutely a blow to national security, to safety, to reason, good judgment, because as you have outlined, Admiral Yost, this is not simply a freeze.

But it would be a cut of more than $150 million, where resources have already been very, very badly stretched. That would make impossible adequate law enforcement efforts in the area of drug interdiction. It would, I think, have the kind of reverberation that would be felt through your service that would adversely impact the spirit, the morale of Coast Guard personnel.

I do not care how dedicated a person is, it reaches a point in time when they are called upon to do the impossible and see that others are not sharing in what would be I think more than just a sacrifice, but the kind of destructive implementation of a budget process that flies in the face of reason.

Now having said that, I certainly do not mean to cast any dispersions upon those who come up with this budget because difficult, difficult times lie ahead. But I think as we move into the implementation and begin to become rather specific with respect to various agencies, that we had better set straight our course and our priorities.

I think the Coast Guard should be made one of those priorities. If it means we have to readjust some of the dollars, I know that the chairman shares a strong concern for the adequacy of the Coast Guard, particularly as it lies in the area of drug interdiction and enforcement and carrying out the stated policies of the Congress and the nation.

I would hope that we could restore all, if not a substantial amount, of those dollars that otherwise would be lost. That is going to mean that we are going to have to take those dollars from other areas. But I think this is a priority that we can not turn our backs on.

I thank the chairman for giving me this opportunity of sharing my thoughts with you. I look forward to working with him in connection with this, and I hope that we can foster a policy that not only this committee can accept unanimously, and I would like to see us do that, but also one that we can get our colleagues on the floor to also work with us in implementing.

It is absolutely unconscionable to think that this kind of funding level will do anything but wreak havoc and create great dissension within the ranks of the Coast Guard. We can not ask you to do, your personnel who are down there, out there on the line, to do things and then to take the resources away when we are adding additional responsibilities. It just flies in the face of reason.

So, Mr. Chairman, I look forward to working with you, and Admiral, one more thought. I am going to pursue our private conversations as it relates to better integration, some ideas to get some of the services, your service and others, to work more closely together. It is indispensable. We have got to do it.

It does not mean that we all have to love each other in this process, but this is a nation that is under siege, and if we can not pull our various components together in the most effective way then we are all a little derelict on the watch. I know if anybody can do it you have got the heart and you have got the loyalty of those under you to bring about a better relationship with all of the services. So I will be calling upon you.

Thank you, Mr. Chairman.

Senator LAUTENBERG. Thanks very much, Senator D'Amato. I appreciate your willingness to chair the hearing in my absence and the comments that you made, I think, are right on the mark.

We have a problem, Admiral Yost, as you know, and that is that the Coast Guard is included with the transportation function generally. And as a consequence we have an unholy competition between various essential functions in our country that have to have their funding.

It raises an interesting question about where Coast Guard, for instance, ought to be, and I am sure we would find the same concerns with other transit departments who need funding and which need resources.

Admiral, you have come into friendly waters, as you obviously see. And I apologize for being late. We were doing aviation in the Commerce Committee and I was a witness and apparently my colleagues enjoyed the chance to get back at me because they kept me in the witness chair for a bit.

I extend my welcome to you formally now, in front of the subcommittee. I have an opening statement which I will not recite right now. We will include it in the record to save time.

[The statement follows:]

STATEMENT OF SENATOR LAUTENBERG

Today, the subcommittee will consider the budget requested for the U.S. Coast Guard. Our principal witness is Adm. Paul A. Yost, Jr., the Commandant. This will be the first time Admiral Yost has appeared before this subcommittee since assuming his new post. So let me extend a warm welcome, Admiral, on behalf of the subcommittee. We are happy to have you here. Without objection your biography will be entered in the record since this is your first appearance before the subcommittee. You and the Coast Guard have a very tough job and I want you to know that you will have our support in meeting your responsibilities.

The total fiscal 1988 request for the Coast Guard is $2,718,667,000. This is an increase of $176,267,000, or 7 percent, over the enacted fiscal year 1987 level. The budget resolution reported from the Senate Budget Committee, however, assumes a general freeze at fiscal year 1987 levels for most agencies in this bill, including the Coast Guard. We will be exploring the implications of such a freeze for the Coast Guard's vital missions in drug interdiction, search and rescue, coastal defense readiness, port safety and security, fisheries enforcement and so on this morning.

The Coast Guard's activities, of course, are especially important to coastal states like New Jersey. We have, regrettably, a serious and growing drug problem in our region. I want to be sure that the Coast Guard, as the lead agency in maritime drug enforcement, is giving the Northeast the priority it deserves.

The Coast Guard also has substantial responsibilities in the enforcement of our environmental laws. Last month I introduced the Plastic Pollution Control Act of 1987 (S. 633).

I wrote this bill because current laws are not being applied to ships dumping plastics and other garbage in the ocean.

I hope that bill will become law. But until it does, I'd like to know what the Coast Guard can do to address this problem. They have done very little to date. The Library of Congress says the Coast Guard could not cite any cases where current law had been used to penalize a ship for discharging plastics.

Yet plastic pollution is a major problem in New Jersey and throughout the nation. Our marine life and birds are being killed. New Jersey's coastal economy depends on a clean coastal environment. Our fishing industry is threatened. Our beaches and vital tourism industry are at risk. We are facing significant environmental and economic losses.

I want to make sure that the Coast Guard does all it can to prevent this kind of pollution. I look forward to the Commandant's comments on this issue.

The committee is also interested in the actions being taken to prevent the loss of the Coast Guard's only recruit training facility because of a serious beach erosion problem affecting the Cap May, NJ, area. The training facility also serves as a base for air and sea rescue operations so vital to the protection of life and property in the busy waters off the southern New Jersey coast. Ironically, it seems that the federal government, through the construction of a federal navigation project at Cap May Inlet many years ago, helped create the beach erosion problem. According to the U.S. Army Corps of Engineers, the inlet jetties have interrupted the natural movements of sand which serve to replenish beaches. As a result, most of the protective beaches in the area have been destroyed.

I don't believe we can afford to delay action on this problem much longer. The Coast Guard and the Corps have to get together and work out a responsible comprehensive plan for saving Cape May and arresting the erosion of related beaches.

We look forward to having your comments on these and other issues this morning, Admiral. You have a tall order to fulfill. I hope that this subcommittee will be in a position to be helpful under the budget resolution that is finally adopted.

VITAL COAST GUARD FUNCTIONS

Senator LAUTENBERG. I know you have things to do. I wanted to just ask a couple of questions.

I can not help but note that it is not a coincidence that Senator D'Amato from the state of New York, with its coastline and its interest, its Long Island Sound, the state of New Jersey, with its extensive coastline, both feel very warmly toward the Coast Guard, because we see what you and your people do in not only moments of emergency, moments of rescue, but in helping us fight drugs, something that I consider critical for our states, states around this country with any kind of coastline, and in fighting pollution in ways that you have unique capacity to do.

That has not been as much a part of the mission as I would like it to be, and I hope that with some new legislation that is being proposed, that we will be able to engage it more directly. We feel confident that you and your people, your organization, the Coast Guard, will be able to carry out a mandate like that, and provide the kind of supervision that is necessary.

Admiral, the fiscal year 1988 budget resolution, and forgive me if any of this is redundant, reported by the Senate Budget Committee, included a cut of roughly $250 million below the enacted fiscal year 1987 program levels for function 400, that is our transportation function.

The resolution also assumes enactment of the administration's proposal for Coast Guard user fees, which would generate another $260 million in offsetting receipts. I would like your comment, by the way, that I had an opportunity to review with you yesterday in my office, to be on the record about user fees. Do you want to make reference to that now?

USER FEES

Admiral YOST. You would like me to make my comment now on user fees?

Senator LAUTENBERG. Yes.

Admiral YOST. Yes; let me do that. Thank you. User fees are very much a part of the administration's budget, and I have supported the principle of user fees for some time.

We have a bill, an administration bill, now on the Hill that would provide for about $355 million in the first year and about $438 million after that in Coast Guard user fees. Those fees go directly into the Treasury of the United States.

The Coast Guard has no desire and has always opposed any suggestion that those fees go directly into the Coast Guard coffers as part of the Coast Guard budget. And the reason is that user fees will be an up and down sort of thing and we do not want our budget to depend on how much money we can collect in user fees in a direct connection.

We want it to go in as an offsetting resource, but go in to the Treasury Department. We want to know what our budget is at the beginning of the budget year so we can plan our operations and not be dependent on what might or might not come from user fees over time.

Senator LAUTENBERG. That is like the policeman getting out there and pulling out the radar and collecting fines to meet this week's payroll. Not a position that you ought to be in.

Admiral YOST. Yes, sir; it is not professional.

Senator LAUTENBERG. We are not discussing user fees per se, though I think we both agree that there is merit to considering that. But it ought not be the difference between whether or not you pull the boat out of the harbor or put the crews to work next week.

EFFECTS OF BUDGET FREEZE

You are requesting an overall increase of $176 million, 2,500 service positions, 311 civilian positions for fiscal year 1988. For the purpose of this discussion, let us assume that Coast Guard is exempted from any of the $250 million cut contained in the budget resolution and is instead frozen at the fiscal year 1987 enacted level, including the spending supplementals.

Could you just give me your view, in detail, of the possible major effects that such a freeze might have on your program?

Admiral YOST. Yes, sir; I would like to do that very much. After our discussion yesterday, Senator, I spent some time over the evening in taking a closer look at this. As I testified just before you came in, a freeze in that budget at 1987 levels would, in fact, be for the Coast Guard something above $160 million cut, because we had about $160 million out of the DOD appropriation last year that is now being annualized in our budget.

So a freeze at last year's levels would not contain that $160 million. That was for LEDETS, it was for drug omnibus bill money, it was $75 million out of DOD for operating expenses and it was $30 million for pay in the supplemental.

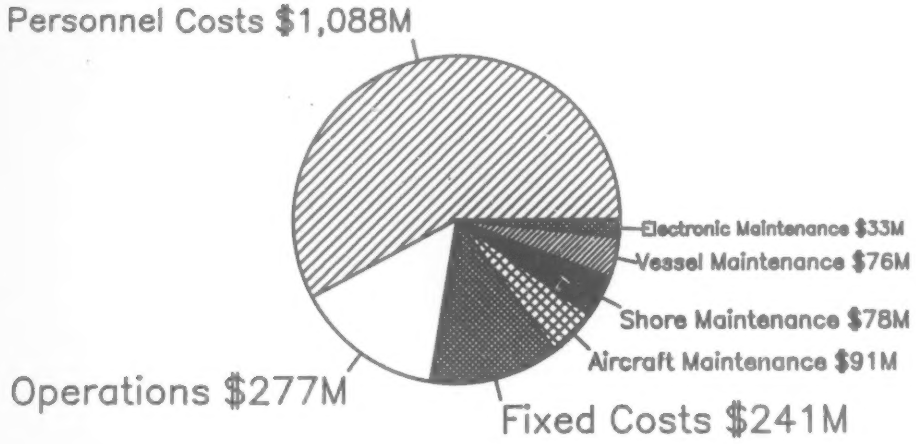
A cut of that size, $159 million to $160 million, is a massive, massive cut for the Coast Guard and in order to get some idea of what it might mean I went back into previous years, in the early 1980's, where we had looked at those kind of cuts in detail.

What I found is, first, the Coast Guard is an operating agency, and any cuts translate immediately and directly into people, hardware, and facility reductions. That is unlike a program like urban mass transit, highway trust funds, or other funds that can be cut back without people and hardware disappearing.

The second thing that I found is that the budget cuts, of course, do not reduce the Coast Guard's statutory responsibility in search and rescue, commercial vessel safety including licensing of officers, and inspecting of merchant vessels. It does not reduce our responsibilities in aids to navigation. The buoys still have to be there.

So much of our mission can not be reduced. The only thing that can be reduced that has any money in it is law enforcement, that is drug law enforcement, some of our defense readiness, and a few other things that are discretionary. Now I made up for the record a pie chart that I wish I had a bigger copy of but a pie chart I would like to submit that basically shows how much $160 million cut and what it equals to.

[The chart follows:]



COAST GUARD OPERATING EXPENSES
FY 1987

REDUCTIONS NECESSARY TO MEET BUDGET CUT

For instance, if we cut out all of our electronics maintenance and all of our shore maintenance, we would not quite make it to the $160 million cut. If we cut out all of our vessel maintenance and all of our aircraft maintenance, we would just barely accommodate that $165 million cut.

If we cut out three-fourths of all of our operations in the Coast Guard, we would be able to accommodate that cut. If we cut out about three-fourths of all of our fixed costs, buildings, electricity and what have you, we could almost meet that cost. So it is that kind of an impact.

Now I went back to 1982 to see what we did when we had a cut in 1982 of $125 million in 1982 dollars. That cut was later almost fully restored, but in that 1982 cut we listed the following things that we were going to cut to meet that $125 million.

We were going to reduce our civil rights support, we were going to reduce the Coast Guard Academy. We were going to reduce all of our merchant marine and port safety programs. That is including pollution. We were going to close our oceanographic unit. We were going to reduce our boating safety program. We were going to close or reduce many, many search and rescue stations on both coasts and the Gulf of Mexico and the lakes as well.

We were going to: Reduce all of our safety inspection staffs; reduce our public affairs staff; retire, that is decommission, one executive aircraft; and decommission our only oceanographic ship. We were going to reduce by 25 percent all of our aids to navigation teams throughout the United States that maintain the buoys.

We were going to reduce our recruiting, reduce our training. We were going to close every vessel traffic system in the Coast Guard. And those closures included two of the biggest ports in the world, New York City and New Orleans, as well as Houston and San Francisco.

We were going to close our air station at Los Angeles, one of the biggest air stations on the west coast. We were going to take out of commission four C-130 aircraft. We were going to decommission one high-endurance cutter. We were going to decommission seven HH-52 search and rescue helicopters.

We were going to decommission three medium-sized buoy tenders. We were going to decommission two more high-endurance cutters. We were going to close the air station in Puerto Rico completely. We were going to close one district office, and we had not decided which one, although we talked about the 2nd district office in St. Louis.

We were going to close all of our overseas offices. We were going to decommission two of our large buoy tenders. We were going to close completely the air station at Savannah, GA. We were going to decommission our only icebreakers on the lakes.

We were going to reduce all of our support personnel throughout the Coast Guard. We were going to close completely the air station at Arcada in California. We were going to reduce and relocate, rebalance all of our aircraft resources, reduce our group offices, close one additional district office, that was the 2nd district office that we were talking then I guess about the office in Cleveland. And we were going to close our base at San Juan.

Now, that was how we were going to accommodate $125 million.

Senator LAUTENBERG. Sounds like we would have been better off to recite what we would have left.

Admiral YOST. Yes, sir; it would be easier. Now I could go through the same litany of what we would do in 1986 and now 1988, but it would be about the same kinds of impacts. Massive, unthinkable, and because they were unthinkable, when we started to close those things, Congress took a look at it and said, this is unthinkable, and most of the funds were restored in 1982.

SEARCH FOR AREAS FOR SAVING

Senator LAUTENBERG. A cut of this size that could result from either inaction, that is leaving it at a freeze level, or imposing a cut, would impose a severe hardship on the operation of the Coast Guard.

I would urge you, as I stated to you yesterday, to look at what areas for saving there might be. Because when an organization has your size and has your budget, it is believed, correctly or otherwise, that there are opportunities to cut some corners without cutting the heart and soul out of the operation.

I would again bring that to your attention because we are all obliged to reduce spending, whether it is in the offices of the Senate operations, the various departments of government, to do with less. Unfortunately, frankly, it puzzles me how we can expect people to do more with less.

And as the job enlarges, whether we are asking you, and we would like to have the chart for our record, please, a copy of that for my own review. As we enlarge the scope that we would like to see the Coast Guard deal with, it is hard to imagine that it is not going to take additional resources, not simply leaving things where they were, unless there is enormous waste going on.

I do not hear that about the Coast Guard. I would always be interested. It is my responsibility to find out about those things, and whatever means are available to us we will take to make sure that everybody is doing what they should. We believe that is taking place currently.

But if we are going to extend the distance from the shore that you are going to be out on, if we pass legislation for the plastic pollution control, if we want you to get even more effective against drug shipments into this country, if we want to continue to maintain a prospering fishing and marine industry, very important to this country of ours, nutritionally as well as recreationally, it is hard to imagine that you are going to be able to do it with us cutting back the availability of either equipment or personnel.

DEPENDENCE ON SUPPLEMENTAL

Admiral Yost. What is almost as debilitating, not quite obviously but almost as debilitating, is to go through what we went through in 1986, which was a massive cut at the front end but assurances that there would be a supplemental. So in order not to go into the Anti-Deficiency Act we had, while we were waiting for the supplemental, to cut back all of our operations.

So in 1986 we cut back and cut back, waiting and waiting for the supplemental, which came toward the end of the year. Once we got the supplemental we had already cut back so many things that we could not recover. We are just now recovering in our recruiting and other areas from cutbacks we made in 1986, even though many of those cuts were restored toward the end of the fiscal year.

You just can not catch up in an operating agency when you do not know what your budget is going to be and people are saying, do not worry, there will be a supplemental. I have got to worry. The law says, do not go into deficiency.

Senator Lautenberg. I must tell you, I do not think that winking at the budget process is a good way to deal with it. I do not think that it is honest. I do not think that it affords the opportunity for good management to be closing our eyes at day one and saying that somewhere during the middle of the year you are going to get the remainder of what you need.

I think it is deceptive for the American people as well and I think it is demoralizing for those responsible for operating the complex and effective organization like yours to be able to say, OK, do not worry about it, we are going to be able to man the ships and send out the planes without knowing that you have a year to operate with.

I would love to see budgeting for things like Coast Guard extend beyond 1 year. Especially on the capital side of the thing, to be able to say, look, it is going to take us *x* years to build these vessels, the 170 footers or the others that are presently being built and make the commitment, get it off the darn budget so it is not under review. Because it confuses things.

What we do is we take the capital side of things, compare it to the operational side of things and say, well, you know, here is a cut. It is too much of an invitation to grandstand, very frankly, with what purports to be efficient budget management.

ACTION TO CONTROL OCEAN POLLUTION

Anyway, I do not want to have to make your case. I will let you do that. I want to touch on the Coast Guard's action to control ocean pollution, including this plastic pollution which I referred to.

You know, last month I introduced a bill to inhibit at least, hopefully to prevent plastic pollution of our ocean. Under current law the Coast Guard could take the action against vessels discharging garbage into the sea. That is correct, right?

Admiral YOST. Yes.

Senator LAUTENBERG. Putting aside activities to monitor ocean dumping vessels, is it not correct that the Coast Guard has not used current law to actually penalize ships for discharging plastics or other garbage into the sea?

Admiral YOST. I would have to reply to that for the record, what we have actually done. It is a very difficult enforcement problem because you have got to find the vessel either actually dumping or be able to trace the garbage or the plastic back to that vessel. That is a very difficult problem.

[The information follows:]

First, I believe it is important to define what "current law" actually encompasses. The principally applicable statute is the Refuse Act of 1899 (33 U.S.C. 407) which prohibits the disposal of any refuse matter, including plastics, from any source into the navigable waters of the United States, including the territorial sea. To my knowledge we have not prosecuted violations of the Refuse Act involving the disposal of vessel source garbage into the sea, largely because litigation must be accomplished via an already overburdened criminal process. Because a contravention carries very small criminal fines, in turn, reducing the serious nature of an offense; such matters in the view of district attorneys are at too low of a priority to expend their time and effort. Additionally, it is important to remember that our authority seaward in these matters is limited to the territorial sea (3-mile limit). What is needed are substantial criminal sanctions and efficiently assessable civil penalties. We are addressing this in the implementing legislation we are preparing for Annex V of MARPOL 73/78, which we believe would be the appropriate international regime.

Senator LAUTENBERG. Right. So therefore you have not been able to do it as effectively as you would like to.

Admiral YOST. We do not yet have an effective deterrent against that. Senator Stevens from Alaska has discussed that with me at length. He feels that it is very debilitating for the Alaska fisheries, for the seal population as well as for the east coast of the United States.

Senator LAUTENBERG. Especially with the plastic materials that we are trying to confine or remove, these plastic nets entrap sturgeon, entrap sea life, thousands of birds each year are destroyed as a result of becoming entangled in these nets.

One of the things I suggested to you, and I have been thinking about, how do you trace a dumped trash load, plastics, et cetera, back to the ship that did it?

I asked you if it was possible to have some kind of a harmless dye that vessels have to include in their trash accumulation facilities so that when they dumped at least maybe there is a line, we know it is going to disappear in not too long, but if there is a plane overhead or a ship out there, might be able to see it for a while, long enough to discourage them from taking an precipitous action.

At least to know that a big brother is going to be watching if you do this.

Admiral YOST. This is also an international problem. It is not just the U.S. flag vessels doing this. It is all vessels from all countries. We probably have less of a merchant marine than we should have, and so it is something that we need to take up and probably are taking up in IMO, internationally as well.

I will look into that as well, sir.

Senator LAUTENBERG. Is it true that Coast Guard vessels have in the past, still might occasionally throw their trash into the sea?

Admiral YOST. They certainly have in the past, and when I first started going to sea it was a routine thing to dump your trash at sea. Your requirements were by law and by treaty not to dump them within a certain range of the beach. It seems like it was 25 miles, I can not remember.

But coming into port you always dumped garbage well before you got into port and it was routine and everybody did it. That is now against the law and Coast Guard ships do not do that now and officers and petty officers are very, very much aware of not throwing anything over the side. That is a big change in the way we treat the sea now.

Senator LAUTENBERG. The likelihood of catching dumpers by beefing up your presence in established shipping lanes could be a help, could it not, in terms of monitoring these illegal or discharges out there? If your presence, is it a problem that goes beyond our ability to control it, that is catch the dumpers who are out there?

MAJOR DUMPING PROBLEM

Admiral YOST. One of the major dumping problems is, of course, off of some of our major cities, including New York City, where we have areas for dumping garbage and things that will not float and what have you, and that is legal. It is the plastic problem, the floatible stuff that is illegal and that is the problem and we do not have a lot of resources dedicated to that or a method of effectively utilizing resources that would be dedicated.

It is difficult from an airplane or even a ship to determine that a vessel is dumping something that is illegal, that is floating, garbage that is plastic, et cetera. It is a difficult problem. I do not know that we——

Senator LAUTENBERG. Do we need new laws, Admiral, to improve enforcement against the polluting ships?

Admiral YOST. Let me answer that for the record. We have laws. We are not very effective at enforcing them because they are difficult to enforce. Whether different laws would help us in some way, let me look into that and answer that specifically, sir.

[The information follows:]

As for the at-sea disposal of ship-generated garbage, the Coast Guard has enforcement responsibilities under the Refuse Act of 1899 (33 U.S.C. 407) which prohibits the disposal of any refuse matter, including plastics, from any source into the navigable waters of the United States, including the territorial sea. However, this statute is difficult to enforce and prosecute since a contravention or violation carries very small criminal fines. The Federal Water Pollution Control Act, as amended, requires the issuance of a National Pollutant Discharge Elimination System [NPDES] permit before garbage may be discharged from any point source into the navigable waters of the United States. Issuance of these permits are administered by the EPA.

In short, these statutes do not adequately address the problem of disposal of ship-generated garbage at sea. Because plastic pollution in the oceans is not unique to the U.S. coastlines, but is an international problem, an international solution is needed.

The Coast Guard supports U.S. ratification and implementation of Annex V (Regulations for the Prevention of Pollution by Garbage from Ships) of the International Convention for the Prevention of Pollution from Ships, as revised by the 1978 Protocol Relating Thereto (MARPOL 73/78). This Annex, among other things, would prohibit the disposal into the oceans of all plastics with a few exceptions. As you may know, the President transmitted Annex V to the Senate for its advice and consent to ratification on February 9, 1987, and the Coast Guard has been preparing corresponding implementing legislation for the administration. In our legislative proposal we are addressing specific areas to enhance enforcement of the Annex V prohibitions such as provisions for substantial civil and criminal penalties.

CAPE MAY BEACH EROSION

Senator LAUTENBERG. I want to talk about a facility that has a great interest to me and my state and the region that it shares, and that is, it is not the region, I guess it is the whole country, and that is the training facility at Cape May. It is a national resource, and it is being threatened by beach erosion in a very serious way, as I saw it on a visit that I had there.

How serious, Admiral, is that problem?

Admiral YOST. I think it is extremely serious. I became aware of it when Congressman Hughes and I flew over the area about 4 years ago, landed at various positions along the beach and landed and visited at Cape May, our training center there, for an extensive period of time.

At that time the incursion was beginning to remove our gunnery, our rifle range and some other things. Since I have been there Congressman Hughes tells me as recently as yesterday that we are now losing our helo pad, some of our buildings are out in the water. We are losing valuable, valuable land there.

The Coast Guard has a couple of proposals on how to try to protect our own property. They have not been very effective to date. They are expensive. But it just is not our own property that is at danger. City property on both sides of us is at danger. It is washing away. It is a difficult engineering problem.

In these kinds of problems it is my understanding you can never be sure that any particular solution, however expensive, is really going to work. The Corps of Engineers have a couple of proposals, I understand.

Congressman Hughes asked me if I would intervene in some way with the Corps or the committees of Congress that are looking into this and make them aware of my concern, and if there is a legal way of doing that I will. I have written a letter to the Corps of Engineers months ago, telling them of the impact on my property, on federal property, not my property, the federal property at Cape May. It is awesome and it is appalling what is happening.

Senator LAUTENBERG. Could we not train those recruits at other places?

Admiral YOST. We do not have any other place in the United States that we could train recruits. That is the single and only recruiting——

AMOUNT INVESTED IN CAPE MAY TRAINING FACILITY

Senator LAUTENBERG. How much of an investment do you think we have got there right now?

Admiral YOST. I could provide that for the record. I would guess half a billion dollars. It is $100 million, I am told. But a major, major investment.

[The information follows:]

The estimated cost of replacing Training Center Cape May is $175 million. This estimate includes $85 million for the facilities including tenant operational units such as Air Station Cape May, and $90 million for replacement of the waterfront land (450 acres).

Senator LAUTENBERG. $100 million invested there.

Admiral YOST. I would think at least that.

Senator LAUTENBERG. I would think so.

Admiral YOST. And tradition, and part of the community, et cetera, you can not put a value on that.

Senator LAUTENBERG. Do you know how far the coastline has receded from any point in time?

Admiral YOST. It is a matter of hundreds of yards. I mean, it is not a few feet. It is literally hundreds of yards where we have lost parts of our rifle range, we have lost our helo pad, we have lost buildings, and it is moving at a pretty good rate.

Senator LAUTENBERG. Does it make it less efficient? Does it reduce the capacity to use that facility as we continue to use that shoreline? Can you keep backing away from it? Or is there anyplace to back away to?

Admiral YOST. Well, we are backing away as quickly as we can, but we are losing up to 30 feet per year, and at this rate by 1990 we are going to lose the entire small arms range.

There are not very many places in the United States any longer where you can establish a small arms range. You need land to do that. And we are losing that land to the sea. By shortly after that, about 2000, we expect to lose the air station hangar and the entire concrete apron. So this is a major problem for us.

Senator LAUTENBERG. Well, in a meeting I had with some of your people, Congressman Hughes and somebody from the Corps, it does look like there is a proposal that could mitigate against the continued loss of that shoreline and I do not know yet whether or not your people have looked at it closely enough to lend your stamp of approval to it.

I am not exactly sure that I recall specifically how it was going to be done, but obviously it needed a jetty, and needed to move one that is presently there. It is apparently a product of poor design, a decision made many years ago that we cannot go back on.

Have you looked at that proposal?

COST OF PREFERRED SOLUTION TO PRESERVE SHORELINE

Admiral YOST. We have looked at that solution. It is the preferred solution, apparently, by the Corps. It is not inexpensive. It looks like our portion of that cost would be about $2 million, but there would be at least an equal cost by the local governments, state government there, so it is a big project were it to be done.

Senator LAUTENBERG. You say $2 billion?

Admiral YOST. $2 million, our portion of it would be $2 million.

Senator LAUTENBERG. Well we know it is somewhere between $2 million and $2 billion. There is a little latitude there.

Admiral YOST. That seems a little light to me.

Senator LAUTENBERG. We are talking about a proposal I think that was about $40 million in scope. Do you know?

Admiral YOST. That may be for the entire project.

Senator LAUTENBERG. Yes, well, you cannot do one without the other. It is impossible to do one without the other.

Admiral YOST. It is.

Senator LAUTENBERG. And with the investment that we have there and with its presence in the community and in the state, we have got to be able to continue that operation. The Coast Guard, it is too important a part of our being. We are a coastal society. People run to get out there in the water and to use it, and it is the most effective way still to ship goods and materials.

It is the last refuge, I think, for mankind to be able to protect the environment. You play a role there and it includes training people, it includes recruiting people, it includes being able to pay them and offer them a promotion and career.

Does your current budget request any funds for dealing with the erosion problem?

Admiral Yost. We do not have any funds, but neither do I think there is a funded or approved project by the Corps to do that. That would be a Corps project. So I would indicate to the Corps, which I have, the importance that I put on it and then the Corps would need to prioritize that within the nation's budget.

What I might add to that is if this continues without a major project, prioritized and funded, then the Coast Guard will need to do something at a much lesser cost to see if we can protect our own interests there to the exclusion of others. That is, we will see if we can operate, just stem the erosion on our own property.

Senator Lautenberg. Well, we would like to see that happen because I think it would be awfully hard for you to operate, even if you could rebuild the facility in Idaho or the Arizona desert or something like that. I think it would be very hard to train Coast Guard people in those places.

Admiral Yost. It would be very hard to get to sea from there.

DRUG INTERDICTION

Senator Lautenberg. I just want to talk for a moment about drug interdiction. As it now stands, both Coast Guard and Customs have responsibility and some capability for air interdiction of drugs. And I understand that coordination between Coast Guard and Customs on air interdiction has been the focus of some considerable debate, now before the National Drug Enforcement Policy Board.

What is your view of the proper division of labor between Coast Guard and Customs with respect to this, in particular, to air interdiction?

Admiral Yost. There has been a debate. The Drug Policy Board is dealing with that matter in the very near future, in order to prepare a report to the Congress that is due by sometime mid-May.

That report is required by the DOD authorization bill and the language of that bill requires the President to report to Congress on the drug interdiction, the organization for drug interdiction to include designation of lead agencies and areas of responsibility.

RECOMMENDATIONS OF DRUG POLICY BOARD

The Drug Policy Board is dealing with that now. I was at a meeting yesterday, I have another meeting today on it. My views, which have been stated both in testimony and through the Drug Policy Board, are that the area of responsibility should be divided with: Customs having the responsibility, lead agency for the land area; DEA, Drug Enforcement Agency, having the lead agency for the area of overseas; and the

U.S. Coast Guard having its traditional lead agency responsibility in the maritime area, both surface and air in the maritime area, surface and air over land and surface and air in the foreign areas.

That has been my clearly stated preference. I have been heard at the Drug Policy Board. I have been very vocal. I have been very definite, and I have been definitely heard and it is now up to the Drug Policy Board, led by the Attorney General, to make decisions on how that will come out. He has had other recommendations from other agencies.

I hope it comes out in accordance with my recommendation; but, however it comes out I will feel that I have been heard in this matter.

Senator LAUTENBERG. Do we need more than one antidrug air force?

Admiral YOST. I think that it is not good to proliferate air forces in this country. The Coast Guard now operates some 200 aircraft, most of them are maritime patrol type of aircraft and helicopters. Customs is operating around 90 aircraft, the great majority of those being administrative type of aircraft.

But I would say that there is room for all the aircraft that we have in the inventory now to be operated. What needs to be done is the coordination, the lead agency assigned so that when a lead agency has an area of responsibility that everybody who is operating in that area is operating in support of that lead agency.

I do not see any reason to take Customs' aircraft and give them to the Coast Guard or Coast Guard aircraft and give them to Customs. Both of those organizations, and DEA, have their own aircraft, their own pilots, their own maintenance, their own contracts. They are operating those aircraft very efficiently.

What we need is the lead agency designated and everybody operates in support of that lead agency in his area of responsibility.

Senator LAUTENBERG. Admiral, we thank you very much. Any further questions that we submit to you for the record, we would appreciate a quick response on.

You have, as I said earlier, friends of the Coast Guard and that goes beyond just the conversation we have had here today. It is a recognition of the important role that you play in protecting our coast, extended certainly by changes in culture which mean protecting our young people, protecting our society in a very significant way.

SUBMITTED QUESTIONS

I have some questions that Senator Cochran of Mississippi has asked us to put to you. They will be submitted to you in writing along with questions from myself and Senator D'Amato, and again we would like for the record to have them answered promptly.

[The following questions were not asked at the hearing but were submitted for response for the record:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

DRUG INTERDICTION/BUDGET

SENATOR LAUTENBERG: The Congress provided $128 million to the Coast Guard for drug interdiction as part of the Omnibus Anti-Drug Abuse Supplemental of 1987. $39 million of this is for operations. You state that your budget annualilzes these funds. Would you be able to maintain this higher level of effort within a freeze? If so, how? If not, why not?

ANSWER: The Coast Guard would not be able to maintain the higher level of drug interdiction. The importance of drug interdiction is certainly recognized but a freeze would be, in effect, a $165 million reduction. The recent realignment of support and management functions reduced our "overhead" even further, increasing the impact of any reduction on operations. It would be difficult to cut programs such as search and rescue that are directly related to the safety of life and property. Law enforcement, including efforts authorized in the Anti-Drug Abuse Act of 1986, would inevitably face reduction.

In specific terms, a freeze in FY 1988 would mean a cut-back in personnel, since approximately sixty percent of the budget funds personnel costs, as well as a reduction in operating facilities. A significant number of cutters and aircraft would have to be laid up, which would be reflected in fewer available resources for drug interdiction.

SENATOR LAUTENBERG: How would you manage the operations of two E-2Cs? Would you reduce operational time?

ANSWER: As the primary surveillance resources available to combat air smuggling of drugs, every attempt would be made to avoid a reduction in E-2C operations. However, a freeze might curtail the availability of interceptor aircraft which would lower the overall effectiveness of air interdiction.

SENATOR LAUTENBERG: You are also planning to operate two joint command, control and communications centers with the Customs Service - one in the Southeast and one in the Southwest. How would a freeze affect these centers?

ANSWER: Funding for construction and operation of these centers is being provided by the Customs Service. The Coast Guard will commit a number of personnel for joint staffing. The effect of a freeze on the Coast Guard's contribution would depend on Customs' ability to complete and operate the centers within its own funding constraints.

GENERAL LAW ENFORCEMENT/BUDGET

SENATOR LAUTENBERG: You are requesting $646,232,000 for the enforcement of laws and treaties account, an increase of $11 million. How is this total amount allocated among drug enforcement, fisheries enforcement, immigration enforcement, highjacking/theft of vessels, and other illegal activity?

ANSWER: The total amount requested for the law enforcement program, including headquarters and program support, is $691,449,000. The total program request is allocated as follows:

Drug enforcement	$447,100,000
Fisheries enforcement	
Foreign	104,690,000
Domestic	48,155,000
Other, including immigration and theft	91,504,000
Total	$691,449,000

SENATOR LAUTENBERG: What level of funding would you recommend for this account under a general budget freeze?

ANSWER: Given the Coast Guard's expanding role in the nation's war on drugs, the requested increase for the Enforcement of Laws and Treaties account is necessary to maintain the Administrations's desired high level of drug interdiction operations. Under a general budget freeze, the Coast Guard would have to conduct drug interdiction operations at some reduced level. Recommended reduced operating or funding levels have not been identified for the Law Enforcement mission.

DEFENSE READINESS/BUDGET

SENATOR LAUTENBERG: The Coast Guard has also been given additional mission responsibilities in the area of coastal defense readiness. You are requesting $123.4 million for defense readiness, an increase of over $90 million. Would you maintain this level of readiness activity under a general budget freeze? If so, how?

ANSWER: No, we could not maintain this level of readiness activity under a general budget freeze. In FY 1987, $75 million was provided to the Coast Guard on a reimbursable basis by the Department of Defense, U.S. Navy, Operation and Maintenance. These funds are being used in FY 1987 for operations and training related to the Coast Guard's defense and military readiness missions. Under a general budget freeze, the $75 million would not go into our appropriation base from the reimbursable category; thus we would be unable to maintain, in FY 1988, the same level of readiness activity being carried out in FY 1987.

SENATOR LAUTENBERG: Which of your other missions would you reduce?

ANSWER: Because the Coast Guard's budget is extremely tight, there is little flexibility when reducing it. A budget cut of any magnitude will immediately impact on operations. Cuts would be difficult in those areas which have a direct relation to lives and property saved, such as search and rescue, aids to navigation, and commercial vessel safety. There is more discretion to cut back in military preparedness and law enforcement -- but these are areas with significant national emphasis. About 60% of the Coast Guard budget funds personnel costs. The only way to achieve a budget reduction is to cut personnel strength which means reducing operating facilities. The lay-up of facilities would include a mixture of our cutters, aircraft and shore units. This is the only way to generate savings -- from personnel salaries and operation and maintenance dollars -- to meet a reduction.

LEDETS/BUDGET

SENATOR LAUTENBERG: You indicate that your budget transfers $15 million for 300 law enforcement detachment (LEDET) personnel, which are now reimburseable from DOD, to the Coast Guard. Can you assume the additional costs within a freeze? If so, how?

ANSWER: Our budget includes $9 million for LEDET personnel, vice $15 million. Even so, the Coast Guard could not assume all of the additional costs of LEDET billets in the event of a budget freeze. Because these personnel are recognized as an important asset in drug interdiction, and to the extent that a budget freeze would not affect the Navy's ability to provide ship time for law enforcement operations, the Coast Guard would attempt to preserve some portion of these detachments.

DRUG INTERDICTION

SENATOR LAUTENBERG: You are proposing to delete the language earmarking funds specifically for drug enforcement activities, ($372,983,000 in F.Y. 1987). Last year, your predecessor stated he had no real objection to this language. Why is it again proposed?

ANSWER: There is no real objection to the language. However, we feel the earmarking of funds is unnecessary and may restrict the flexibility we need to respond to all contingencies. The Coast Guard could be involved in search and rescue, enforcement of fisheries laws, drug law enforcement, defense readiness and a wide variety of other missions. To earmark one of these areas may restrict flexibility to respond in another.

SENATOR LAUTENBERG: Last year you estimated general law enforcement cutter operating hours for F. Y. 1987 at 217,500. This year, your estimate is 210,000 for F. Y. 1987 and 217,500 for F. Y. 1988. Estimated aircraft general law enforcement flight hours are similarly off - from 31,850 hours to 27,000 hours. Yet we have been providing additional funding - $39 million in the Drug Bill last fall alone - for drug enforcement. What explains this discrepancy between funding increases and reductions in the level of effort?

ANSWER: Projections are based on prior years actual operations and the changes needed for forecasted budgetary climate. Projections for the FY 1987 budget were made in December 1985 and were based on the FY 1985 level of operations, which were relatively high, and expectations of modest but continued growth in the budget. Projections for the FY 1988 budget were made in December 1986 and were based on the FY 1986 level of operations, which were low because of the "squeeze down/slow down" initiated in response to Gramm-Rudman-Hollings reductions. FY 1988 budget projections reflected the reality that there would be continued pressure to reduce expenditures and thus restrict budgetary growth.

The additional $39 million appropriated for drug enforcement was used to increase recruiting to restore personnel levels; operate two E-2's, which were not included in the aircraft projections since it was unknown when they would be operational; purchase new equipment for drug law enforcement; and for pipeline training for new equipment coming on line. $22.1M of the $39 million was used to offset a fuel reduction which allowed operations to be maintained at their FY 1986 levels.

DRUG INTERDICTION/AIR INTERDICTION

SENATOR LAUTENBERG: As it now stands, both the Coast Guard and the Customs Service have responsibility and capability for air interdiction. I understand that the coordination between Coast Guard and Customs on air interdiction has been the focus of considerable debate and is now before the National Drug Enforcement Policy Board. What is your view of the proper division of labor between Coast Guard and Customs with respect to air interdiction?

ANSWER: The Coast Guard endorses an "Area of Responsibility" (AOR) concept and uses it successfully within our own organization in other mission areas. In the recent agreement with USCS forwarded jointly to the NDPB, I believe we found a solid basis for future drug enforcement cooperation. That agreement specifies USCS the lead agency on land, at and between ports of entry; it specifies USCG as the lead agency for the maritime area from shoreline seaward and acknowledges that air interdiction is a unique function properly tasked by both the land and maritime lead agencies and coordinated jointly by USCG/USCS. I understand the overseas activity is to be coordinated by DOS.

SENATOR LAUTENBERG: Why shouldn't this responsibility be concentrated in a single law enforcement agency?

ANSWER: The designation of lead agencies will provide the coordination of resources that will lead to an effective interdiction and enforcement effort by using the collective capabilities of all agencies. Once assigned, the lead agency should have the necessary coordinating authority in its area and the other agencies would provide support. This concept offers the strength of ultimate responsibility in an area, with accountability for getting the job done, and focuses the capability of the forces operating in the area.

SENATOR LAUTENBERG: Why do we need more than one anti- drug air force?

ANSWER: What we need is the coordinated direction of all the resources we can bring to ear on the problem. The most proven way to do that is by designating a lead agency as that coordinator and bringing all others (including their assets) to act in support of the responsible agency. Recent decisions reached by the NDPB and a MOU between Coast Guard and Customs provided to the NDPB provide precisely that organization.

Examples of this structure currently at work are: Coast Guard - SAR, MDZ...DOD - JCS, CINC's.

DRUG INTERDICTION/NORTHEAST/N.J.

SENATOR LAUTENBERG: As you know, Admiral, we have a very serious drug problem in my state and in the Northeast in general. What are the major points of entry for maritime traffickers in the Northeast?

ANSWER: The three major points of entry for maritime traffickers in the Northeast are the ports of New York, Boston, and Portland. Commercial vessels are frequently used to smuggle contraband into these major ports secreted in legitimate cargoes. Another frequently used modus operandi for this area is to have motherships transfer their illicit narcotics to local private vessels far at sea. These vessels then mix with the coastal maritime traffic and smuggle their high value cargoes into any one of the numerous smaller ports, harbors, bays, or rivers that abound along this coastline. The geography and population distribution along our Northeastern coast makes it an ideal area for smugglers to operate.

SENATOR LAUTENBERG: What are you doing to suppress this traffic?

ANSWER: Our cutters have regular patrols all along the eastern seaboard including the waters off New Jersey. When intelligence provides an indication of smuggling activity cutters are directed to that area and surveillance aircraft are launched to provide locating and identification information.

SENATOR LAUTENBERG: Do you have the resources you need?

ANSWER: To stop ALL drugs from entering the U.S. - no. In many cases our resources are widely spread out to cover the vast areas of open ocean as well as fishing areas off the East coast. Certainly additional aircraft and cutter resources would provide a higher probability of interdiction simply due to a greater coverage in drug trafficking areas.

SENATOR LAUTENBERG: Is drug interdiction a high priority for your units in the Third District?

ANSWER: Yes. While the majority of our routine surface patrols concentrate on fisheries enforcement on Georges Bank and the Gulf of Maine we realize any vessel we encounter is capable of carrying contraband and our boarding parties are always alert for the possibility that a vessel may have contraband onboard.

PORT SAFETY

SENATOR LAUTENBERG: Shipments and transfers of hazardous materials impose a potentially very dangerous situation at our ports and waterfront facilities. As you know, New Jersey is one state with a number of waterfront facilities where hazardous materials are handled. However, New Jersey does not yet have an inspection and enforcement for ports or waterfront facilities and must rely on the Coast Guard. Which other states with ports or waterfront facilities used for shipments or transfers of hazardous materials also depend on the Coast Guard for inspection and enforcement?

ANSWER: The Coast Guard conducts inspection and enforcement activities at all ports where vessels transfer bulk and packaged hazardous materials to and from waterfront facilities. In some ports, state agencies also conduct similar inspections on waterfront facilities, but it is believed by the Coast Guard that these activities are very limited. State activities are not monitored by the Coast Guard, and the Coast Guard keeps no statistics on which states have such programs. State and local inspections at waterfront facilities are generally limited to fire protection and fire fighting requirements.

SENATOR LAUTENBERG: What ports or facilities are you most concerned about from the standpoint of safety?

ANSWER: Every U.S. port falls within the geographic jurisdiction of a Coast Guard Captain of the Port (COTP). Each COTP makes his or her own determination as to which facilities in his or her zone they are most concerned about from the standpoint of safety. In general, however, the types of waterfront facilities which receive the most safety scrutiny from the Coast Guard are those which handle flammable and combustible liquids in bulk, and those which handle large volumes of containerized or break bulk (palletized) hazardous materials.

The ports of New York/New Jersey, Miami, FL, and San Juan, PR, have come under increased scrutiny in the past year by the Coast Guard and DOT's Research and Special Programs Administration (RSPA). The complex of facilities in the port of New York/New Jersey handled approximately 2,250,000 freight containers in 1985, and that volume alone generates a certain amount of concern and enforcement activity. Since Miami and San Juan seemed to have a degree of noncompliance not commensurate with their respective sizes and volumes of traffic, enforcement efforts were stepped up.

Additionally, ports such as Los Angeles/Long Beach and Seattle, WA, handle large volumes of freight containers. Due to the high rate of noncompliance with the hazardous materials associated with freight containers nationwide, these ports especially are a safety concern. Houston and Port Arthur, TX, which have several dozen bulk oil and chemical facilities each, also cause much concern.

SENATOR LAUTENBERG: How many hazardous materials inspections did you make last year?

ANSWER: During FY 86, the Coast Guard conducted 4051 waterfront facility inspections, inspected 1399 vessels, and monitored an additional 8032 cargo transfer operations to and from vessels for compliance with applicable bulk and packaged hazardous material regulations.

SENATOR LAUTENBERG: How many full-time and part-time inspectors do you have?

ANSWER: During FY 86, 863 Coast Guard personnel spent approximately 20.4% of their time conducting bulk and packaged hazardous materials related activities. These personnel are also responsible for inspections of vessels carrying non-hazardous materials, and oil and hazardous substance spill response. The Coast Guard has no full-time hazardous materials inspectors. This program is conducted in a manner similar to most other Coast Guard multi-mission programs.

SENATOR LAUTENBERG: What is the extent of noncompliance found by your inspections?

ANSWER: Coast Guard hazardous materials inspections indicate a substantial non-compliance among packaged shipments. Problems include improper securing of cargo in freight containers; missing warning placards on the sides of the containers; and, improper documentation of the hazardous materials. Although any violation of the regulations presents a safety hazard to vessels, ports and facilities, some pose a more immediate threat than others. Those violations which pose an immediate and serious threat to life and property occur infrequently.

The number of violations for bulk shipments of oil and chemicals by vessel is considerably lower than that for packaged shipments.

SENATOR LAUTENBERG: Which kind of hazardous materials are most often involved in cases of noncompliance?

ANSWER: The type of hazardous materials most often involved in cases of noncompliance varies. For example, in the fall of 1986, the Coast Guard became aware of widespread non-compliance in the domestic lead-acid battery recycling industry and among manufacturers of new batteries in the Far East, who import their products into the United States. Numerous violations were discovered in import shipments of new batteries and export shipments of used batteries. Following several months of targeted inspections, detention of improper shipments, and communication with various shippers and trade associations by the Coast Guard and RSPA, this problem has been largely corrected and compliance is now considerably higher than previously.

Around the same time, through coordination with the U.S. Customs Service, the Coast Guard and RSPA became aware of similarly widespread noncompliance in import shipments of fireworks and other explosives imported through the Port of Baltimore, MD. Again, the rate of compliance has been increasing through aggressive targeted inspections, detentions of improper shipments, and communication with the industry.

SENATOR LAUTENBERG: Which kinds of shippers or other facilities are most often out of compliance?

ANSWER: Shipments in intermodal freight containers are those most often not in compliance with the hazardous materials regulations. Shippers of freight containers, particularly Non-Vessel Operating Common Carriers (NVOCCs) and freight consolidators who pack containers, are those most often not in compliance.

The Coast Guard has conducted a 6 month pilot container inspection program to determine the extent of noncompliance with the requirements for segregation, blocking and bracing, etc., within freight containers. The results of the program indicated widespread noncompliance, although the majority of the violations noted were not considered major, from a safety standpoint. As a result of the findings in the pilot program, the Coast Guard is currently drafting procedures which will implement a permanent program at our field units to open freight containers and inspect their contents on a regular basis.

SENATOR LAUTENBERG: How many formal enforcement proceedings did you initiate last year?

ANSWER: The Coast Guard initiated 658 civil penalty cases for violations of regulations on waterfront facilities which handled bulk and packaged hazardous materials in FY 86.

REORGANIZATION/LOGISTICS

SENATOR LAUTENBERG: Earlier this spring, you proposed a major realignment of your management and support functions. Under your proposal, two regional Maintenance and Logistics Commands (MLC) would be established to take over the management and planning functions previously performed at 12 separate locations - one at Governor's Island and the other at San Francisco.

Why did you find it necessary to consolidate these functions? What problems exist and what benefits will be derived?

ANSWER: This realignment provides for a concentration of expertise, necessary with the increasing technical complexity of our ships, planes and C3I systems. It also allows for standardization of engineering, maintenance and logistics support services. We can provide major project support, specification drafting and other services from two central locations with fewer personnel than were needed at the twelve separate district offices. We achieve economies of scale, reduce overhead, and have fewer "mid-level" supervisors and inspectors. This is simply a better way to manage and provide engineering and logistics support services, especially as we look to future needs.

This realignment also reflects the change over the past 10 to 15 years in the scope and tempo of Coast Guard operations, which have shifted from a localized, district focus to a regional scope - for example, fisheries law enforcement and drug interdiction. Maintenance and support had remained a localized district function, and with the increasing complexity, had the potential to distract the focus of the district commander from operations. Realignment focuses the district commander once again on operations and solving operational problems, and eliminates existing workload imbalances.

In addition, this realignment allows us to "grow from within" and realize productivity gains - in keeping with the present Administration's goal for efficiency in government. Billets which are currently providing support services will be freed up to offset increasing operational requirements such as drug interdiction and military readiness, without having to cut our other services to the public.

We know that with this change there will be some short term disruptions and difficulties, and perhaps some temporary inefficiencies. Some of our experienced civilian employees may be reluctant or unable to tranfer to the new central staff at the Maintenance and Logistics Commands. We are providing information and assistance in finding employment in the Coast Guard or other Federal Agency to these employees.

But, on the whole, we see mostly positive aspects in realignment...it's just good management.

SENATOR LAUTENBERG: Your realignment also calls for the elimination of two Coast Guard Districts. The Third at Governor's Island, would be divided between the First and Fifth. The Eleventh and Twelfth Districts would be combined. Obviously, the impact on Governor's Island and the area served by District Three is of particular concern to me, to Senator D'Amato and other members of this committee.

What effect will the consolidation of the Third District with the First and Fifth have on your operations along the Jersey Coast? Will your capabilities for law enforcement, search and rescue, aids to navigation, etc. be reduced in any respect? If so, why? If not, why not?

ANSWER: Realignment of district boundaries will not diminish or change the manner in which we serve the public. We are not reducing or changing the locations or capabilities or resources of any our operating units. The boundaries between Coast Guard districts are primarily for internal administrative purposes. The district boundaries which exist today, and those which will exist in the future after we have realigned, are invisible to the boater in distress or to the mariner, and to the Coast Guard unit responding to a call for assistance, placing an aid to navigation, or conducting a law enforcement patrol.

SENATOR LAUTENBERG: What will the net impact be in terms of personnel for Governor's Island and for your stations in New Jersey?

ANSWER: In New York, as a result of realignment, 9 military and 105 civilian positions are established above the current staffing levels on Governor's Island. There will be no change in staffing at any of our stations or operational units in New Jersey.

110' ISLAND CLASS PATROL BOATS

SENATOR LAUTENBERG: Admiral, last year your predecessor informed the Congress that the acquisition of 15 110' Island Class Patrol Boats, built based on a supposedly proven design, allowed the Coast Guard to quickly get a boat for drug interdiction missions. However, because these boats admittedly were not capable of satisfying your multi mission needs, we were under the impression that the Coast Guard would continue with its plans to design a "fully capable" boat as the fleet-wide replacement patrol boats. After the new boats were put into service, hull problems showed up which were attributed to the thinness of the hull and the speeds at which the boats were being operated. Contracts for an additional 21 boats were recently awarded which will bring the total to 37. Does the Coast Guard still plan to procure a "fully capable" patrol boat for its coastal defense mission? If not, why did you change the plan?

ANSWER: Yes. The Patrol Boat (WPB) Capability Replacement Acquisition project includes a mix of craft to perform the Coast Guard's patrol boat missions into the twenty-first century. This mix includes a conventional monohull patrol boat, formerly referred to as "fully capable" patrol boat, now called the Heritage Class, as well as the 110' Island Class, of which 14 are operating very successfully.

The Coast Guard has been closely monitoring these new boats because of their lightweight construction. Last spring we requested the U. S. Navy to examine the bottom structure to determine the boat's maximum operating envelope in very high sea states. That analysis indicated that operating these craft beyond their operating envelope could cause deformations in the bottom plating which would reduce their maximum potential speed. Their concern was over a possible loss of capability and not a safety issue. However, all bottom plating deformations observed so far during dry-docking are within manufacturing tolerances.

Recently, a few, very small cracks did occur in the bow above the waterline (a completely separate area of the hull from the Navy analyzed portion) of three boats operating out of Puerto

Rico. They were minor in nature, did not affect the integrity of the vessels, and were promptly fixed by the builder at no cost to the Coast Guard. A modification of the design will be incorporated in the construction of all boats to prevent this problem from recurring on any of the 37 Island Class patrol boats delivered or on order. These 37 Island Class are authorized additions to the Coast Guard's drug interdiction capability or provide timely renewal of the patrol boat capabilities previously provided by 95' WPBs which have reached the end of their service lives.

SENATOR LAUTENBERG: If so, why were an additional 21 of the 110' Island Class boats procured despite their limitations?

ANSWER: Sixteen of these craft were funded in the FY-86 DOD appropriation for "Coastal Defense". These craft will renew the Coast Guard's existing patrol boat capabilities currently provided by aging 95' patrol boats. The remaining five Island Class were funded as part of the Anti-Drug Abuse Act of 1986. These additions to the patrol boat fleet will be used to improve the Coast Guard's drug interdiction capabilities. All are being built to improved hull strength specifications under a Navy administered contract.

SENATOR LAUTENBERG: When will you expect to have your design completed for a fully capable boat?

ANSWER: We expect to complete review of the contract design of the Heritage Class patrol boat, construct an above deck mock-up, and receive industry comment on the design package by July 1988.

SENATOR LAUTENBERG: When would you need to start the acquisition process for the replacement boats?

ANSWER: The acquisition process, as defined by OMB Circular A-109 is well under way and we will be seeking approval of the Secretary of Transportation to proceed to Key Decision Three, Construction of Pre-Production Models, within the next year. We plan to solicit offers for a contract to build these pre-production models, or prototypes, in FY88. Successful Operational and technical evaluation of these prototypes would permit full production (Key Decision Four) and solicitation of offers to begin full production in FY91.

DRUG INTERDICTION/GOALS/MEASURES

SENATOR LAUTENBERG: What are your specific goals with respect to drug interdiction and how do you propose to measure the Coast Guard's progress toward achieving them?

ANSWER: Coast Guard drug interdiction goals are coordinated and consistent with the National Drug Policy Board's National and International Drug Law Enforcement Strategy which was published in January 1987. An implementation plan for this strategy is being developed which will include action items to assess progress. Broad quantitative measures of effectiveness cannot be usefully applied in drug interdiction. Seizures can be easily tallied. However, the quantity of drugs shipped can only be estimated.

SENATOR LAUTENBERG: What percentage of the total volume of Marijuana, Cocaine, Heroin and other illicit drugs do you estimate the government succeeds in interdicting?

ANSWER: DEA publishes periodic reports estimating these numbers. Estimates are currently between 10 and 40 percent. The range is extreme because it is often difficult or impossible to quantify how much was shipped through the maritime region.

SENATOR LAUTENBERG: Of the total interdicted, how much does the Coast Guard account for?

ANSWER: For marijuana shipped through the maritime region-about 60+ percent of the quantity interdicted is credited to Coast Guard efforts. The remaining amount is primarily made up of the many thousands of small seizures made at border check points, airports and similar locations where individuals try to hand carry or transport it in private vehicles. For cocaine - a rough estimate of Coast Guard seizures represents about 15 percent. This number is increasing rapidly due to apparent shifts in trafficking patterns and the Coast Guard's new role in air interdiction. The Coast Guard accounts for a very small percentage of heroin interdicted.

SENATOR LAUTENBERG: What specific plans do you have to improve your interdiction performance? That is, how do you plan target your resources better so as to increase the percentage of illicit drugs you interdict?

ANSWER: Through the National Narcotics Border Interdiction System the Coast Guard will ensure maximum utilization of drug interdiction assets by coordinated international drug interdiction operations. The Coast Guard will continue to replace older facilities with modern, more capable platforms and use new assets such as the E-2C aircraft and aerostats. We will maximize use of DOD assets and stress intelligence gathering to make our surface patrols more effective.

SENATOR LAUTENBERG: In F. Y. 1986, the Coast Guard spent $397.8 million on interdiction activities. This year you plan to spend almost $548 million on interdiction - a 28 percent increase. Do you expect a corresponding increase in drug seizures, arrests, vessel and aircraft confiscations etc.

ANSWER: No. As our interdiction efforts become more effective the traffickers have historically shifted to other modes of transportation. As we put more pressure on the maritime region the traffickers shift to the land borders and seizures in the maritime region will appear to decline.

SENATOR LAUTENBERG: What are the comparable figures so far this fiscal year?

ANSWER: Statistics matrix by fiscal year is attached for your review.

(The information follows:)

SEIZURES THROUGH 5/18/87

U. S. COAST GUARD
GENERAL LAW ENFORCEMENT CONTRABAND SEIZURES BY FISCAL YEAR .

		73 - 78	79	80	81	82	83	84	85	86	87	TOTAL
SEIZURES BY COAST GUARD	CASES:	203	106	93	207	238	210	364	331	263	132	2,147
	VSLS:	189	99	78	184	185	145	223	106	147	91	1,527
SEIZURES BY OTHER AGENCIES W/ CG ASSISTANCE	C:	70	27	19	25	30	26	45	50	38	21	351
	V:	65	25	19	21	24	21	33	39	13	10	270
MARIJUANA(LBS) BY COAST GUARD	C:	3,961,203	2,865,103	1,169,730	3,720,977	3,595,351	2,299,825	2,857,511	1,955,076	1,840,678	791,866	25,057,320
	V:	3,800,147	2,838,733	1,046,525	3,637,372	3,534,089	2,239,278	2,795,985	1,861,460	1,748,382	756,727	24,258,698
MARIJUANA(LBS) OTHER AGENCIES W/ CG ASSISTANCE	C:	550,002	340,429	315,965	284,046	180,925	101,849	134,635	326,197	233,601	43,498	2,511,147
	V:	530,927	340,379	315,965	231,785	152,025	91,805	127,740	319,682	113,821	40,721	2,264,850
COCAINE(LBS) BY COAST GUARD		64.01	0.01	0.00	0.00	40.10	55.46	1,932.42	5,890.10	7,494.58	7,469.73	22,946.41
COCAINE(LBS) BY OTHER AGENCIES W/ CG ASSISTANCE		4.41	0.00	10.01	0.00	224.10	1,700.02	75.00	79.75	1,004.21	2,328.50	5,426.00
HASHISH(LBS) BY COAST GUARD		3,700	41,580	2,534	0	34,580	1	29,962	0	2,099	2	114,458
HASHISH(LBS) BY OTHER AGENCIES W/ CG ASSISTANCE		6,139	1,100	2	167	10	0	0	0	1	0	7,427
HASHISH OIL(GAL) CG OR ASSIST		0	0	5	0	7	0	20	0	35	13	80
THAI STICKS(LBS) BY COAST GUARD		27,315	0	12,623	0	0	0	1	0	0	0	39,939
THAI STICKS(LBS) BY OTHER AGENCIES W/ CG ASSISTANCE		0	5,751	0	0	0	0	16,000	0	0	0	21,751
DANGEROUS DRUGS (DOSES) BY CG		200	500,060	4,700,557	5,961,036	61,628	100	0	1	0	2	11,223,584
ARRESTS	TOTAL:	1,269	622	408	1,010	1,128	780	1,149	833	720	407	8,326
	CG:	1,042	510	319	939	1,048	709	1,056	737	646	375	7,381
EST ST VALUE OF CONTRABAND $MILLIONS	TOTAL:	1,673.68	1,781.40	1,060.48	2,662.91	3,760.01	2,581.44	3,250.71	2,561.84	2,434.98	1,181.27	22,940.72
	CG:	1,472.80	1,597.19	845.46	2,477.53	3,542.60	2,421.92	3,089.11	2,220.07	2,156.86	1,062.19	20,885.73

C = CASES - TOTAL CASES PROSECUTED INCLUDING FLOATING BALE PICKUPS
V = VESSELS - TOTAL NUMBER OF VESSELS INVOLVED IN CASES PROSECUTED

DRUG INTERDICTION/VESSEL SEIZING

SENATOR LAUTENBERG: You estimate that you will seize 150 vessels in connection with drug enforcement in F. Y. 1988, the same as the current year. If you are increasing your drug enforcement efforts, why won't you be seizing more vessels?

ANSWER: The number of vessels seized should remain steady due to the success of our interdiction efforts which has caused drug smugglers to change their modes of operation. For example, they have: increased cocaine shipments; begun to use Mexico as a transshipment area; reduced their level of maritime smuggling; shifted to air shipments; and continued the use of hidden compartments necessitating smaller loads. The supply of marijuana available for shipment has been reduced due to: eradication in Colombia; maritime route denial during special operations; and significant seizures and destructions of marijuana stockpiles ashore by Colombians during special operations.

DRUG INTERDICTION/COORDINATION

SENATOR LAUTENBERG: Which agency has primary authority with respect to coordination of drug interdiction activities - The National Narcotics Border Interdiction System (NNBIS) or the National Drug Enforcement Policy Board?

ANSWER: NNBIS coordinates operational drug interdiction activities. The National Drug Enforcement Policy Board (NDEPB) provides "top level" guidance and has been recently renamed the National Drug Policy Board (NDPB)to recognize the demand side of the drug "equation". The NDPB provides the policy guidance and coordination at the agency level.

SENATOR LAUTENBERG: How is a coordinated interdiction policy assured?

ANSWER: Coordination is achieved through the guidance and decisions of the NDPB and then incorporated into individual agency directives. Actual drug interdiction operations are coordinated by regional NNBIS centers.

SENATOR LAUTENBERG: If, as was indicated last year, "On-Scene Commanders ... must call the shots", how can the Coast Guard effectively participate in a coordinated interdiction program?

ANSWER: On-scene commanders are often already working in concert with resources of more than one agency, particularly in a pre-planned special operations that are being increasingly used. Decisions made by the on-scene commander are usually based on the prior coordinated effort made to reach a situation where interdiction action can be consummated.

DRUG INTERDICTION/REQUEST TO OMB

SENATOR LAUTENBERG: What was your drug enforcement request to OMB for FY 1988?

ANSWER: Our request to OMB included $411 million in the Operating Expenses appropriation for drug law enforcement while the President's Budget included $432 million.

POLAR ICEBREAKER ACQUISITION

SENATOR LAUTENBERG: You request $2 million to continue efforts to explore the replacement of your two Wind Class icebreakers. You state that the funds will permit you to take a "Parallel-Track Approach": continuation of your design work for acquisition of two new icebreakers and simultaneous evaluation of a lease arrangement for the same icebreaker capabilities. These strategies would presumably allow you to either acquire one new icebreaker in 1992 and 1993, or lease icebreaker services. But Public Law 98-557 (the Coast Guard Authorization Act of 1984) required you to complete plans for the acquisition of two new polar vessels by 1990.

First of all, you told the committee last year that based on your schedule at that time, your preliminary design work would be completed by November 1987 and a construction contract would be awarded by 4th quarter of FY 1988. Shipbuilding would take 4 years and the first one would be delivered in 1992; the second in 1993.

Is this schedule still good?

ANSWER: No. That is not the current schedule.

SENATOR LAUTENBERG: If not, what is your current schedule and the reasons for any slippage?

ANSWER: The Preliminary Design was completed, on schedule, in September 1986. The next phase, Contract Design (Specifications), will be completed on schedule in November 1987. The current schedule is to award a Detail Design and construction contract or a lease during 2nd quarter of FY 1989. Shipbuilding would take 4 years and the first one would be delivered in 1993; the second in 1994.

SENATOR LAUTENBERG: What is your ballpark estimate of what a new icebreaker built to your specifications would cost?

ANSWER: A ballpark estimate based on a two ship buy awarded in FY89 is $325 million per ship, which does not include shore support.

SENATOR LAUTENBERG: If your objective is to have a four icebreaker fleet, which of the five current ships will be decommissioned and when?

ANSWER: The USCGC GLACIER (WAGB 4), home-ported in Portland, Oregon will be decommissioned on June 7th, 1987

SENATOR LAUTENBERG: How much additional monies over and above normal maintenance and repairs are you spending on the two Wind Class ships each year just to sustain their operations?

ANSWER: The following additional monies over and above normal maintenance and repairs have been obligated on the two Wind Class ships:

	FY84	FY85	FY86	FY87*
CGC NORTHWIND	--	$2,656,000	$1,679,000	$30,000
CGC WESTWIND	$657,000	$5,504,000	$1,033,000	$47,000

*Through 1 May 1987.

SENATOR LAUTENBERG: Are you able to adequately support the needs of the National Science Foundation with the current icebreaker fleet?

ANSWER: The 1984 interagency Polar Icebreaker Requirements Study concluded that a fleet of four polar icebreakers would be sufficient to meet the needs of all federal and federally-sponsored users. The Coast Guard has provided icebreaking services to the National Science Foundation for U.S. Antarctic station resupply and vessel escort as well as for support of polar marine research around the continent. Barring a major icebreaker casualty, or a significant increase in user demand, four Coast Guard icebreakers should be able to meet NSF's needs in the Antarctic as well as those of other federal agencies.

The 1984 study recognized that existing U.S. polar icebreakers are not equipped to fully support modern polar marine research. These deficiencies have been remedied in the Polar Icebreaker Replacement (PIR) design through extensive consultation with user agencies and members of the polar science community to incorporate their needs. All user requirements, including NSF's, were considered in the design. In the interim, the Coast Guard has proposed making improvements to some or all of its existing icebreakers to upgrade their ability to support science in the polar regions.

SENATOR LAUTENBERG: If not, do you know how the NSF intends to accomplish its missions?

ANSWER: I am unaware of NSF's plans to accomplish its missions.

SENATOR LAUTENBERG: You have known since 1984 that the two Wind Class icebreakers had to be replaced. The requirement that you explore the feasibility of leasing icebreakers is a new wrinkle and this program is already going to be well past the deadline imposed by Public Law 98-557. Who instructed you to explore the leasing option?

ANSWER: During September 1986, the Coast Guard was informed by a commercial firm of its intention "...to submit an unsolicited proposal to build and charter one or two commercial polar icebreakers to the Coast Guard". The Department of Transportation and OMB believed that the approach warranted further study. Consequently, the Coast Guard initiated a separate parallel project, now merged, to examine the feasibility of leasing icebreakers.

SENATOR LAUTENBERG: When did this become effective?

ANSWER: The Coast Guard initiated the lease project in November 1986.

SENATOR LAUTENBERG: In regards to the leasing idea, you put a notice in the Commerce Business Daily in November 19, 1986, that the Coast Guard was interested in evaluating the feasibility of leasing and was making a market survey to determine if industry was interested in such an approach. What were the results of your market survey?

ANSWER: In February 1987 the Coast Guard conducted a pre-solicitation conference. 58 representatives from 38 companies attended. In general, the results of the survey indicated: (1) uncertainty of authorizing legislation to lease; (2) lack of

Coast Guard position on foreign competition; and (3) a short timeframe (45 days) proposed for a Request for Proposal (RFP) response.

The uncertainty of the Coast Guard receiving authorization to lease made some companies reluctant to invest time and money to provide proposals. The 45 day timeframe for a RFP response was viewed by most companies as unrealistic and a desire for at least 6 months to respond was expressed by some.

SENATOR LAUTENBERG: Are polar icebreakers factored into our national defense plans and the multi mission responsibilities of the Coast Guard?

ANSWER: Icebreakers are included in the national defense plans. Present DOD policy is that the firm ice-breaking requirements during wartime can be met by the two POLAR Class icebreakers. Other wartime missions provide for the use of all icebreakers in general purpose and logistic support roles.

Typical Coast Guard icebreaker missions such as for search and rescue, law enforcement, and polar ice operations (logistics & escort duties) have been incorporated into Polar Icebreaker Replacement design.

SENATOR LAUTENBERG: If so, how?

ANSWER: In accordance with P.L. 98-557, Coast Guard Authorization Act of 1984, the Polar Icebreaker Users Council (which consists of the Department of Defense (DOD) represented by the U.S. Navy, the National Science Foundation (NSF), the Maritime Administration (MARAD) and the U.S. Coast Guard (USCG)), was consulted for the purpose of ensuring that all appropriate military, scientific, economic, and environmental interests were taken into account during the preparation of design and construction plans for the purchase of new Polar Icebreaker replacements.

The Users Council's input is documented in the Interagency Report, U.S. Polar Icebreaker Requirements Study (PIRS) of July 1984. Since this report was published, several meetings and briefings have been held during the PIR design process to confirm the capabilities of the vessels. Formal user agency reviews were solicited.

SENATOR LAUTENBERG: Also, how was this requirement factored into the decision to explore the feasibility of leasing icebreaking services?

ANSWER: The decision to explore leasing icebreaker services was based upon a desire on the part of the Department of Transportation and OMB to evaluate all options for obtaining the required facilities. These requirements will be considered in either case.

DRUG INTERDICTION/GOALS/MEASURES

SENATOR LAUTENBERG: Please update the table on page 209 of last year's hearing for the record.

ANSWER: A calendar year table is provided:

SEIZURES THROUGH 1/31/87

GENERAL LAW ENFORCEMENT CONTRABAND SEIZURES BY CALENDAR YEAR

		73 - 78	79	80	81	82	83	84	85	86	87	TOTAL
SEIZURES BY	CASES:	229	110	149	173	232	262	166	294	262	42	2,119
COAST GUARD	VSLS:	215	101	134	146	173	170	217	165	154	31	1,506
SEIZURES BY OTHER AGENCIES	C:	78	25	20	22	34	26	51	44	37	7	344
W/ CG ASSISTANCE	V:	73	23	17	21	28	21	38	28	14	4	267
MARIJUANA(LBS)	C:	4,675,038	2,682,586	2,494,774	2,643,043	3,525,775	2,448,940	2,505,356	2,145,133	1,523,070	263,666	24,907,381
BY COAST GUARD	V:	4,513,982	2,576,216	2,451,459	2,558,466	3,460,795	2,374,988	2,445,454	2,042,801	1,451,021	250,497	24,125,679
MARIJUANA(LBS) OTHER AGENCIES	C:	691,002	353,950	279,607	183,990	194,073	91,988	265,666	244,577	171,546	2,245	2,478,644
W/ CG ASSISTANCE	V:	671,927	353,900	227,446	183,890	165,173	81,944	258,021	168,008	119,970	2,070	2,232,349
COCAINE(LBS) BY COAST GUARD		64.01	0.01	0.00	40.00	9.36	46.20	1,966.92	6,546.82	10,333.66	434.03	19,441.01
COCAINE(LBS) BY OTHER AGENCIES W/ CG ASSISTANCE		4.41	0.00	10.01	96.10	828.01	1,000.01	75.00	847.25	1,391.16	538.50	4,790.45
HASHISH(LBS) BY COAST GUARD		3,700	43,550	564	34,580	0	29,962	1	2,099	2	0	114,458
HASHISH(LBS) BY OTHER AGENCIES W/ CG ASSISTANCE		7,239	1	168	0	18	0	0	0	1	0	7,427
HASHISH OIL(GAL) CG OR ASSIST		0	0	5	7	0	10	18	1	47	0	88
THAI STICKS(LBS) BY COAST GUARD		27315	0	12,623	0	0	0	1	0	0	0	39,939
THAI STICKS(LBS) BY OTHER AGENCIES W/ CG ASSISTANCE		5,500	251	0	0	0	0	16,000	0	0	0	21,751
DANGEROUS DRUGS (DOSES) BY CG		500,200	4,186,060	514,584	5,961,009	61,628	100	0	1	0	2	11,223,584
ARRESTS	TOTAL:	1495	572	728	803	1,076	881	1,038	798	693	127	8,211
	CG:	1,223	463	649	737	988	835	922	722	625	117	7,281
VALUE OF CONTRABAND	TOTAL:	2,004.83	1,916.23	1,992.75	1,802.25	4,042.62	2,729.46	2,968.12	2,723.58	2,140.31	307.39	22,627.54
$MILLIONS	CG:	1,733.92	1,701.93	1,793.90	1,663.08	3,808.58	2,602.08	2,670.25	2,442.35	1,914.45	287.98	20,618.52

YANKEETOWN, FL. PERMANENT STATION

SENATOR LAUTENBERG: Your request states that upon construction of a new station building at a cost of $1.3 million, the additional space would allow you to staff the facility with a complement sufficient to conform to your staffing standards. This staffing would reduce workload from about 100 hours to 68 hiours a week per individual thereby aiding your personnel retention efforts. Is 68 hours the minimum number of hours called for by your staffing standards? Explain.

ANSWER: The workweek standard we use for shore-based personnel varies from 40-68 hours according to unit mission tasking. Search and Rescue (SAR) stations are required to maintain a 24 hour a day boat response capability. To support response our standard calls for the typical boat crew member to spend 1 day in every 4 in a "duty" status. That is, he/she is required to stay at the station continually for 24 hours to provide the all day operational readiness we need. Other days in a non-duty status are spent either as a 8 hour workday or on one of two 24 hour "weekend" liberty periods the standard provides in each week. Since a 1-in-4 duty rotation does not fit evenly into a 7 day week some weeks would involve as much as 80 hours of duty, with others requiring only 52 hours. The average, however, comes to 68.

SENATOR LAUTENBERG: Why wouldn't a further reduction below 68 hours be called for?

ANSWER: We feel that this is an appropriate standard for a unit with a response type mission. Keep in mind that this 68 hours is not all spent operating small boats or in maintaining the station. Some of it includes the time spent just waiting for a call to come in. This standard is in line with that used by DOD for similar response missions.

SENATOR LAUTENBERG: Is excessive duty hours a major cause for personnel turnover?

ANSWER: Our minimal standard Coast Guard-wide is 40 hours a week and goes up from there. The afloat standard is just under 79 hours --- and doesn't take into account the prolonged family separations, which average about 50% of the time a person is assigned to a major cutter. It has not been demonstrated that our standard ashore workweek is a cause of personnel turnover, although interviews with people leaving the service mention the long workweek as a reason for leaving the service. We know that as this workweek lengthens, a derogatory effect on retention will be felt --- particularly when viewed as a part of a career which will be characterized by other assignments (at sea, isolated duty locations, overseas, etc.) that can be as taxing, or even more so, in terms of family separation, duty hours served, hazards exposed, etc.

OIL SPILL PREVENTION STUDY

SENATOR LAUTENBERG: Last year the Committee directed the Coast Guard to conduct a study of oil spill prevention in restricted waterways. The study was to focus on a series of major spills occurring in the Delaware River and was to be conducted in F.Y. 1987. What is the status of the Study?

ANSWER: That study is presently being conducted by the Office of Marine Safety, Security and Environmental Protection and is approximately 50% completed.

SENATOR LAUTENBERG: When will the report be sent to the Congress?

ANSWER: It is anticipated that the study will be complete by the end of FY87. However, if because of the extensive scope of the study it is not completed at that time the committee will be provided with a detailed interim report and what, if any, recommendations will be forthcoming.

SENATOR LAUTENBERG: If the study has been completed, what steps are recommended for preventing oil spills?

ANSWER: The study has not been completed.

SENATOR LAUTENBERG: Did the Study show the need for immediate changes to the spill prevention program for the Delaware River?

ANSWER: Yes.

SENATOR LAUTENBERG: If so, describe the changes.

ANSWER: As a result of the study, to date the Coast Pilot has been amended and new navigation guidelines for the bay and the Delaware River have been issued. For vessels transiting above the Chesapeake and Delaware Canal, these guidelines include a manned anchor detail of two qualified personnel stationed on the forecastle, with both anchors backed out to the waters' edge and ready for letting go. For vessels calling at Marcus Hook either to anchor or dock, tugs must be along side and made fast between lighted buoy 6B and buoy 8B. Diesel vessels, prior to their arrival at the upper end of Liston Ridge, should change over to lighter fuel to ensure better maneuverability. Upon assuming responsibility for the pilotage of a vessel and during the initial Master/Pilot exchange of information, it shall be established that both steering engines and all main generators are operational. In addition, all steering and main propulsion failures, no matter how extensive or intermittent, are to be considered a hazardous condition and must be reported to the Captain of the Port.

210' MEDIUM ENDURANCE CUTTER

SENATOR LAUTENBERG: You request $39 million for a Mid-Life Maintenance program for 210-foot MECs which will include a re-engining of 5 "A" Class vessels. What kinds of engines will the "A" class cutters have after they are re-engined?

ANSWER: The "A" Class cutters will have ALCO 251 Phase E main diesel engines.

SENATOR LAUTENBERG: After the maintenance program is completed, what will the maximum speed of these cutters be?

ANSWER: The maximum speed of the 210-foot Class cutters will be 18.5 kts after their Mid-Life Maintenance Availability (MMA).

SENATOR LAUTENBERG: How important is the ability to exceed 18 knots to your law enforcement mission for this cutter?

ANSWER: Not very. Although a high speed chase boat may from time to time be desirable, 90% of our 210's employment time is spent at patrol and transit speeds between 8-13 knots. High speed traffickers are usually very limited in endurance and operate close to shore. The 210 ft Medium Endurance Cutter conducts the majority of its patrols on the high seas in the Caribbean choke points.

SENATOR LAUTENBERG: After this phase of the program is completed, how many of the 16 cutters will have the standard main propulsion machinery and auxiliary equipment?

ANSWER: All of the 210-foot Class cutters will have ALCO 251 diesel engines. The "A" Class (5 ships) will have Phase E engines and the "B" Class (11 ships) will have Phase B engines. The Phase E engine is an updated version of the Phase B engine. All major auxiliary equipment will be standard throughout all 16 of the 210-foot Class.

270' MEDIUM ENDURANCE CUTTER PROCUREMENT

SENATOR LAUTENBERG: Will the 13 new 270' WMECs all have standardized equipments and/or systems so that logistics, maintenance and training will be simplified?

ANSWER: The 270' WMEC cutters have been contracted out to two different contractors. The first four cutters were constructed by Tacoma Boatbuilding and the last nine are being constructed by R.E. Derecktor of Rhode Island. Within each contract, the equipment provided is identical. However, between the two contracts there are minor differences.

SENATOR LAUTENBERG: If not, why and to what extent will standardization not be achieved?

ANSWER: Since two different contracts were awarded for the 13 cutters, all equipment could not be standardized. However, most equipment has been standardized. Within each contract, the equipment provided is identical. In an effort to minimize the differences between the two contracts, the contract with R. E. Derecktor required identical mechanical equipment for most major systems.

SENATOR LAUTENBERG: How much of the $10 million requested is for retrofit costs and why is retrofit needed?

ANSWER: $2.1 million of the $10 million requested is for retrofit costs. The retrofit availabilities are conducted to accomplish the installation of secure communications and electronic equipments. Each cutter undergoes retrofit following initial commissioning. The retrofits are to complete installations specifically not included in the construction contract.

HIGH ENDURANCE CUTTER FRAM PROGRAM

SENATOR LAUTENBERG: You request $139 million for a fleet renovation and modernization program for 12 of the 378 foot high endurance cutters. Since the cutter's multi mission responsibilities include law enforcement, how important is the ability to operate at speeds above 18 knots to that mission?

ANSWER: As with the 210's, operating at speeds for law enforcement above 18 knots is not normally a critical issue. However, the military readiness posture our high endurance cutters (HEC's) must maintain for missions with the Navy does carry with it the requirement to be able to cruise at speeds higher than 18 knots.

SENATOR LAUTENBERG: Does the vessel have an anti-submarine warfare role?

ANSWER: Yes.

SENATOR LAUTENBERG: If so, what is that role and how important is an 18 knot plus speed capability?

ANSWER: The role of our 378 foot high endurance cutters is to provide anti-submarine (ASW) and anti-surface defense for merchant, underway replenishment and fleet support ships transiting the sea lines of communication (SLOCs). The 18 knot plus speed capability is vital for maintaining station while actively engaging a hostile threat, or regaining station after completing an engagement with a hostile force.

SENATOR LAUTENBERG: Will the 12 vessels undergoing this FRAM be equipped with gas turbine engines which allow speeds up to 29 knots?

ANSWER: The 12 cutters undergoing FRAM are equipped with gas turbine engines and will be so equipped following FRAM. These cutters are able to achieve 29 knots in their pre-FRAM configuration. Because their displacement will increase as a result of FRAM, we do not anticipate that they will be able to achieve the 29 knot speed. Our best estimate is that they will be in the 25-27 knot range.

SENATOR LAUTENBERG: How many 378 foot high endurance cutters does the Coast Guard have and how many of them are equipped with gas turbine engines?

ANSWER: Twelve. They are all equipped with two gas turbines each.

SENATOR LAUTENBERG: Habitability is apparently a problem with your older vessels. How will you be able to accommodate 14 additional crew members on the HECs without adversely affecting habitability?

ANSWER: We anticipated an increased crew requirement when we began FRAM so we specified that we would require berthing for 192 people with no decrease in habitability. Although we cannot state for certain until the first cutter is completed and we inspect the actual berthing conditions, indications from the on-scene Coast Guard inspectors are that we will be able to accommodate the planned increase in personnel with adequate habitability conditions.

UNOBLIGATED BALANCE OF ACQUISITION, CONSTRUCTION, AND IMPROVEMENT FUNDS

SENATOR LAUTENBERG: Last year you responded for the record that the unobligated balance of AC&I funds at the end of F.Y. 1986 would be about $210 million based on your projected spending plans. Why was the unobligated balance and the end of the year $273.206 million , well above your $210 million estimate?

ANSWER: The carryover estimate of $210 million was our best projection at that time, based on ambitious goals. We thought it was both realistic and achievable. However, a number of setbacks occurred causing some large obligations to slip to FY 87.

Reasons for increased FY 86 carryover:

a) Defense Contracting Administrative Service (DCAS) was conducting an audit at Garrett Turbine Engine Company which precluded a large award for spare parts.

b) The production award to Colonna's Shipyard for our 210 ft Medium Endurance Cutters mid life maintenance program was considerably less than expected. The overall program cost will remain as expected however, with contract growth obligations incurred during FY 87 and beyond.

c) Contracting delays - both a growth in procurement workload and increasing contracting complexities and reviews have extended the contract award process considerably. The AC&I program has been operating at essentially fixed personnel levels since 1982 despite significant increases in available funds.

d) The delays and a desire to achieve more efficient economies have caused the Coast Guard to become more dependent upon DOD for contracting support. Award of the Forward Looking Airborne Radar (FLAR) did not occur in FY 86 as expected.

e) Delay in awarding 8a set asides - In our attempt to fully participate in the 8a program we sometimes are unable to reach a mutually acceptable award and must re-enter the competitive procurement process.

f) There were several projects which were slated for late September awards in FY 86. Contracting delays of short duration in such cases caused some awards to slip to FY 87. Additionally some projects had to be re-bid because of unresponsive bids, or re-designed in order to remain within the project ceilings.

COAST GUARD GENERAL QUESTIONS

SENATOR LAUTENBERG: You have been Commandant for about 11 months and have had years of experience in the Coast Guard. What specific objectives have you established for the Coast Guard for the next three years, other than to continue your agency's well-recognized fine tradition?

ANSWER: Drug interdiction, military preparedness, maritime safety and financial responsibility are among the Coast Guard's top priorities. My major objective would include balancing these requirements to provide a well-equipped, well-trained force augmented by a Coast Guard Reserve ready to help us perform our wartime tasks. I am also committed to the principle that the Coast Guard must be treated as our fifth armed force.

SENATOR LAUTENBERG: How would you characterize the present condition of the Coast Guard, what are your most critical problem areas, and what actions are you planning to take to deal with these problems?

ANSWER: Presently, the Coast Guard finds itself a service in transition. Only a few times in our history have we had so many missions and facilities expanding simultaneously. In drug interdiction we are stepping up the pressure with new hardware, sensors, and intelligence coordination. We shortly will have some aerostats operational and a drug interdiction facility in the Bahamas. In the air, we continue to work closely with Customs. Our E2C's are flying and coordinating intercepts by our Guardian jets. At the same time, our OPBAT helicopter commitment may soon be expanding.

Major capital acquisitions and modernizations are proceeding. The first 5 378 WHECs are undergoing FRAM, 270 WMECs continue delivery, 210 WMEC MAA is well underway, another 21 WPB 110's are under contract, new C130s and FLAR for the LRS fleet, and an HH-3F replacement has been ordered. All these deliveries are sorely needed.

While the dynamism of the Coast Guard "in transition" is evident, it is not without its problems. More than ever we are confronted with the chronic follow-on problem ... in personnel and operational funding ... for the new facilities we are receiving. We need more people to operate this new equipment after allowing for decommissionings while we maintain our traditional missions. We need operational funds to fully utilize this hardware ... to put teeth in our drug law enforcement and coastal defense mission. Besides active duty growth, we need sustained growth in the selected reserve to meet our mobilization shortfalls. I am also short of personnel to administer and coordinate AC&I procurements.

In air interdiction I would like to pursue developing the strategy currently in place -- C3I, E2C, intercept, OPBAT — but will need additional resources to do so.

Besides the Coast Guard FY 1988 budget, I am taking whatever actions I can within my present organization to resolve these budget pressures. For example, I have implemented a field support realignment which will allow a reprogramming into operations of almost 500 personnel.

FISCAL YEAR 1988 BUDGET

SENATOR LAUTENBERG: To what extent is the budget you are presenting today different from your request to the Department of Transportation and Office of Management and Budget?

ANSWER: The following table represents our FY 1988 budget request to the Department of Transportation (OST), Office of Management and Budget (OMB), and Congress (CONG).

U.S. COAST GUARD
THREE STAGE BUDGET
(dollars in thousands)

Budget authority	OST	OMB	CONG
Operating expenses.......	$1,968,017	$1,944,066	$1,934,813
Acquisition, construction and improvements........	829,600	641,300	277,893
Alteration of bridges....	19,000	...	...
Retired pay..............	389,775	389,775	386,700
Reserve training.........	74,476	69,200	69,142
Research, development, test and evaluation.....	25,000	20,000	20,119
Offshore oil pollution compensation fund.......	1,000	...	...
Deepwater port liability fund....................	1,000	...	...
Pollution fund...........	5,300	5,300	5,300
Boat safety..............	45,000*	45,000*	45,000**
Gift fund................	80	80	80
Total............	$3,358,248	$3,114,721	$2,739,047

Note: * $15 million proposed to be funded toward Operating Expenses; ** $30 million proposed to be funded toward Operating Expenses.

SENATOR LAUTENBERG: To what extent will the changes made by OMB affect your performance levels?

ANSWER: It is difficult to project accurately the exact impact of the lower resource levels on Coast Guard mission performance, however, the following summarizes:

270-ft WMEC's are slipped and crewing delayed meaning less operational availability in FY 19889 (although the older less capable cutters being replaced will remain in commission until the 270 is ready for operations)

HC-130s will be delivered before their crews are trained, resulting in lost operational flight hours.

HH-65A flight hours will be degraded ... loss of operational flight hours.

Port Security/Anti-Terrorism initiative scaled back ... only most critical harbors will be adequately staffed.

Failure to fully fund cost of living will mean shortages across the board in fuel and spare parts accounts.

DRUG ENFORCEMENT

SENATOR LAUTENBERG: As you know, last fall the Congress passed legislation that was targeted toward the drug problem. As part of the funding of this legislation, we provided the Coast Guard with an additional $39 million for operating expenses and an extra $89 million for additional equipment. What are we going to get for this additional $128 million that would not have otherwise been accomplished in terms of reducing the drug problem?

ANSWER: Without the additional operating expense funds of $39 million Coast Guard personnel levels would have dropped below planned levels and operations would have been reduced from FY 86 levels. The two Navy E-2C aircraft which have already made a seizure, would not be operating and additional equipment required for drug law enforcement would not have been purchased. Without the additional Acquisition, Construction, and Improvements (AC&I) funding of $89 million, our presence in the Bahamas would be reduced, and fewer new C-130 aircraft and 110 foot patrol boats would be available in the near future. The communication equipment necessary for effective drug enforcement operations would be unavailable. With these new assets, increased pressure is being applied to the drug smuggler with the full expectation that a reduction in either drug availability or a shift to new smuggling routes/methods will take place. The bottom line is that the smuggler will face greater risks of detection and increased operational costs as these assets come on line in full force.

SENATOR LAUTENBERG: Would you summarize how these additional operating funds ($39 million) are being expended and indicate the status of the equipment procurements for which additional funding was also provided?

ANSWER: $3.0 million of the $39 million for operating expenses is being used to increase recruiting. FY 86 budget cuts required the Coast Guard to reduce its recruiting efforts, and personnel levels dropped significantly below authorized strength. $8.6 million is being used to operate two NAVY E-2Cs. $22.1 million is being used to offset FY 87 Congressional dollar cuts associated with projected fuel cost savings that were not realized and will allow the current level of operations to be maintained. New equipment for drug law enforcement such as night vision devices, aircraft life support systems, surveillance cameras, etc. is being purchased for $3.5 million. $1.8 million is being used for pipeline training for crews of 110' patrol boats and C-130s funded in the Acquisition Construction and Improvements (AC&I) portion of the Act. $5 million of the $89 million for AC&I is earmarked for the Bahamian Docking Facility. Negotiations are underway to establish the facility, and a travel lift has already been purchased. $38 million is being used to purchase two C-130s with estimated delivery in December 1987. A contract for the purchase of five 110 WPBs for $35 million was awarded in February 1987 with delivery expected in 1988. The purchase of secure communications for $11 million will take place in FY 1987 and FY 1988. This purchase will upgrade our VHF/FM communication system involving our shipboard transceivers and shore-based high level communication sites.

SENATOR LAUTENBERG: Last year legislation was enacted requiring the development of an overall drug abuse prevention plan that coordinates the government's efforts in combatting the use of illegal drugs. To what extent has the Coast Guard participated in developing the drug abuse prevention plan, and what will your role be in implementing the plan?

ANSWER: The Coast Guard is developing a comprehensive preventive education program to combat drug abuse. This program is being developed with the "Just Say No" Foundation and the Department of Health and Human Services. This educational effort will be designed to reach military members, their spouses, and their children with specific emphasis on children of different age groups. The materials and curriculum will be used in homes, child care facilities, and aboard Coast Guard units.

With our civilian personnel, we are participating as one of the model administrations with the Department's extensive employee awareness and education program. As an adjunct to the Department's awareness efforts, we are planning extensive field briefings for civilian employees and their military supervisors on: the President's goals for a drug-free work force; the Department's proposed testing program; and, the rehabilitation opportunities available for employees.

SENATOR LAUTENBERG: Please provide for the record a summary of your participation in this plan, the timetable for issuance and implementation of this plan, also whether your current drug enforcement role will change in any significant way as a result of this plan, and the effect such changes will have on your resource requirements.

ANSWER: Although still in the planning stages, we hope to begin implementation in late fiscal year 87/early fiscal year 88. Thus far, our drug abuse prevention efforts have focused on drug testing, education, and the disciplinary impacts of testing positive. When fully implemented, this plan will have no impact on our law enforcement role or drug interdiction program. While the plan will have little or no impact on our drug law enforcement role, it is certainly consistent with our efforts in that arena.

SENATOR LAUTENBERG: Last fall, it was reported that the federal officials who run the South Florida Task Force acknowledged that, after 4-1/2 years, this ambitious and expensive operation has barely dented the drug trade. According to the article, far more cocaine is being smuggled through Florida since the Task Force was established and the percentage of the nation's cocaine being smuggled through Florida has increased by 10 percent (NY Times, 9-4-86). Also, according to the National Institute on Drug Abuse, the price of a gram of cocaine in South Florida has fallen from $100 in 1982 to as low as $50 (Miami News, 5-16-86). What is your opinion of the success of the South Florida Task Force, and what changes, if any do you believe should be made in the operations of the Task Force?

ANSWER: The South Florida Task Force has been very successful in coordinating marijuana interdiction activities. We still need to improve our efforts in cocaine interdiction and we are working closely with the other agencies and countries to achieve success in this area.

SENATOR LAUTENBERG: Last summer, the Commander of your 7th District, which includes Florida, reportedly stated that America's war against drugs will be won in the minds of our youth and not on the high seas. He is quoted as follows: "We can't win the drug war in transit. The only way is to stop demand." (Charleston, SC News & Courier, 7-4-86). You agree with this statement?

ANSWER: Yes. Interdiction efforts alone will never be able to completely cut off the flow of illicit drugs into this country as long as demand remains high. Nonetheless, interdiction efforts must continue to keep pressure on the suppliers while efforts continue to reduce demand.

SENATOR LAUTENBERG: If so, should the bulk of the funds go for demand reduction or for supply reduction activities, if the Congress were to find additional funds to fight drugs this year as we did last year?

ANSWER: Efforts must currently be balanced in both areas. At some time in the future when a decrease in demand has affected drug flow, then supply reduction activities funded by the U.S. may be able to be reduced as well.

SENATOR LAUTENBERG: With the additional airborne interdiction responsibilities, does your budget request have enough resources so that you will not have to reduce your other activities?

ANSWER: Coupled with productivity improvements we intend to make in FY 88 and 89, such as realignment of support forces, there are sufficient resources for air interdiction in FY 88, without reducing other program activities.

SENATOR LAUTENBERG: If you have to reduce other activities, which one will be reduced?

ANSWER: The Coast Guard is somewhat restricted in what areas it can readily reduce, be it to shore up shortfalls in drug enforcement funding or overall reductions. There is little flexibility in reprogramming from support areas because of documented shortages in fuel/medical/personnel accounts. The district/field support realignment has already maximized efficiencies in that area.

Reallocations for a specific programs, for example Search and Rescue are more difficult because they provide directly to the public, in the case of SAR the saving of lives and property. In the military readiness or drug law enforcement programs, reallocation is not feasible because these are the very areas we have undertaken to expand. The bottom line is we may be unable to aggressively prosecute drug law enforcement without the resources requested in the Coast Guard's Congressional Stage budget.

DRUG ENFORCEMENT

SENATOR LAUTENBERG: Last summer, it was reported that the other military services were going to expand their drug interdiction activities. To what extent has the Navy increased its drug interdiction activities and, if they have, has this had any impact on your enforcement program?

ANSWER: The 1986 Anti-Drug Abuse Act codified the use of Navy resources in drug interdiction. The Navy has since increased the amount of time and number of ships our law enforcement detachment (LEDET) boarding teams are deployed in. The resources the Navy has committed have had a definite, positive impact on our seizure rates. During the first two quarters of FY87 Navy units have contributed to interdiction efforts by hosting Coast Guard boarding teams that seized: 15 vessels, 182,891 pounds marijuana, 539 pounds cocaine, and made 87 arrests. The estimated value of seized contraband is $200 Million.

SENATOR LAUTENBERG: Last year, we were told that intelligence on drug flow was one of the key factors in improving the effectiveness of our interdiction program. What is your assessment of the level of intelligence your agency is receiving on drug shipments?

ANSWER: The assistance provided to the Coast Guard from the National Intelligence Community has been invaluable in increasing the effectiveness of our drug interdiction mission. Because of the classified nature of the majority of the support rendered by those agencies, it is impossible to adequately discuss the support they give. We can assure you, though, that the National Intelligence Community has been very supportive of our drug interdiction efforts, and provided invaluable assistance to us time and time again. They are a great resource, and it is a source of pride to us that we have such a good working relationship with the members of the National Intelligence Community.

There is always some debate on "how much is enough" when it comes to intelligence. If our ultimate goal is to eliminate the drug problem, we would have to say that there is a continuing need for enhanced intelligence programs at all levels of our government.

SENATOR LAUTENBERG: What improvements have there been since last year's testimony?

ANSWER: In calendar year 1986, 56% of all marijuana seized by the Coast Guard was directly related to support provided through a classified intelligence program. Our Intelligence Coordination Center and our Area staffs are improving their collection, analysis, production, and dissemination of intelligence information.

The National Intelligence Community has continued to improve their level of support to the Coast Guard, contributing both information as well as training for our personnel. We are sending two officers per year to the Defense Intelligence College, while nearly 25 individuals attended other short term resident training programs there. Our people are also taking every advantage of special training offered by the Navy as well as other federal agencies.

SENATOR LAUTENBERG: To what extent does the National Narcotics Border Interdiction System (NNBIS) provide intelligence information and how would you assess its effectiveness?

ANSWER: The effectiveness of the national effort in narcotics intelligence has been enhanced by NNBIS, which has helped to focus national attention on the narcotics problem. NNBIS has assisted in coordinating intelligence sharing efforts among the law enforcement and intelligence agencies. The National Intelligence Community has become increasingly involved in the collection and analysis of strategic and tactical intelligence for the drug law enforcement agencies. Multi-agency narcotics interdiction operations sponsored by NNBIS have served to consolidate intelligence collection requirements levied upon all agencies for narcotics reporting. By coordinating efforts and maintaining high-level interest on the narcotics problem, NNBIS has also facilitated an improved narcotics intelligence effort.

SENATOR LAUTENBERG: I understand that you are continuing to have problems with your AEROSTAT balloons crashing in stormy weather. How many aerostats do you currently have and how are they performing?

ANSWER: We are presently operating two Sea Based Aerostats (SBA): a leased SBA from TCOM Corporation and the pre-production prototype from RCA. Both have been performing very well. We have not had any crashes with either of these systems designed to our specification. The crashes, which you are referring to, occurred with a leased system not built to our requirements. Of note, the experience we gained from the crashes of this leased system was most valuable in creating a better system for procurement.

The operational evaluation of the RCA system ended in April 1987, as did negotiations for the follow-on systems. This SBA was evaluated in the cold winter waters of the Northwest Atlantic off the coast of New England. The system performed very well, despite poor weather, rough seas, and two lightning strikes on the same day. Repairs were commenced immediately following the strikes and, within two days, the system was completely operational. Overall, the availability rate of the RCA system was 76 percent. We are considering the award of options for the follow-on RCA systems in the near future. Presently, both the TCOM and RCA SBAs are underway conducting law enforcement operations in the Caribbean. Already, one drug seizure has been directly attributed to an SBA.

SENATOR LAUTENBERG: Would you provide for the record the 3rd District drug seizures, arrests, and prosecutions by District for the last three fiscal years?

ANSWER: The following information includes any case with Coast Guard Involvement.

Drug Seizure Cases

	Coast Guard District													
	1	2	3	5	7	8	9	11	12	13	14	17	LANT#	PAC#
FY 84	2	0	4	9	290	7	0	4	2	0	0	2	0	1
FY 85	4	0	1	6	340	22	1	6	3	1	0	0	0	0
FY 86	2	0	0	2	260	20	7	21	3	1	1	0	4	0
FY 87*	1	0	0	1	116	2	0	3	0	0	0	2	0	0

Drug Seizure Related Arrests

	Coast Guard District													
	1	2	3	5	7	8	9	11	12	13	14	17	LANT#	PAC#
FY 84	20	0	35	57	1013	38	0	16	0	0	0	0	0	3
FY 85	19	0	7	12	698	64	2	25	6	2	0	0	0	0
FY 86	18	0	0	1	563	50	7	46	17	11	6	0	36	0
FY 87*	0	0	0	4	295	4	0	2	0	0	0	0	0	0

* Includes 1st and 2nd quarters FY87.
# LANT: Atlantic Area PAC: Pacific Area

SENATOR LAUTENBERG: Would you provide for the record a table, similar to that on page 13 of the House Committee Report, showing Coast Guard contraband seizures?

ANSWER:

USCG DRUG SEIZURES

COAST GUARD TOTALS:	FY82	FY83	FY84	FY85	FY86	FY87*
Vsls Seized	185	145	223	186	147	70
MJ On Vsls (lbs)	3.53M	2.24M	2.80M	1.86M	1.75M	.62M
MJ Adrift (lbs)	61K	61K	62K	94K	92K	18K
Cocaine (lbs)	40	55	1,932	5,890	7,495	3,964
Hashish (lbs)	35K	1	30K	0	2K	2
Hash Oil (gals)	0	0	0	0	10	13

* Includes 1st and 2nd quarters FY87.
Vsls: Vessels MJ: Marijuana M: Million K: Thousand

SENATOR LAUTENBERG: Last summer you indicated that you intended to emphasize your military missions. In what military areas is the Coast Guard deficient, and what actions have you taken to improve your military preparedness?

ANSWER: With respect to general war readines, we have recently completed an accounting of equipment needs based, in large part, upon the new Maritime Defense Zone (MDZ) commitments. Specific equipment required is outlined in the Total Mobilization DOD Force Readiness Report provided to Congress as required by 10 USC 115a. Servicewide, we require a considerably enlarged inventory to outfit our total force. For example, we need to provide post mobilization personnel with cold and foul weather gear, personnel protective equipment, and night vision devices. For actual operations we have a significant wartime shortfall in small boats, secure communications, and tactical communications. Offensive and defensive weapons for our cutters and aircraft are being identified for Navy validation and the Naval Sea System

Command's Industrial Preparedness Program, determining standard requirements, availability of suitable replacements and the capability to procure additional boats quickly in an industrial mobilization surge. Any additional Navy and MDZ requirements will need to compete against other requirements for funding within the Navy's budget.

Substantial amounts of communications equipment for command and control are being provided by the Navy over the next five years. We will have to upgrade Coast Guard sites for this equipment. We also have a five year Coast Guard Communications Upgrade in progress. Our wartime command organization is in good shape with planning staffs in place. However, our selected reserve of 13,000 is below what it needs to be to meet priority port level responsibilities of General War. To further increase our strength in wartime, the Coast Guard has, for the first time, been given a specific draft allocation, should conscription occur.

We have also begun a study on the expanded use of the Coast Guard Auxiliary for fulfilling our continuing statutory missions, not involving law enforcement or regulatory authority. We do need both improved training and doctrine for Coast Guardsmen assigned to MDZ duties. The Navy is aware of this shortfall. We are working with the Navy to develop a Coastal Defense Course for both services use. We are also included in regional contingency plans overseas. Special equipment for our deploying Port Security Units is being procured now. These forces will be fully outfitted and trained over the next two years, but can respond to a limited extent now. Other overseas deployment units, which provide air logistics resupply and forward area aids to navigation and similar tasks, are being developed to meet Unified Commander's requirements. Specific equipments in these areas are being developed.

SENATOR LAUTENBERG: Please provide for the record a summary of your military missions as delineated in the Maritime Defense Zone plans that have been established.

ANSWER: The Maritime Defense Zone (MDZ) Commands integrate Coast Guard and Navy capabilities in coastal defense. The Coast Guard contribution in the MDZ area of responsibility consists of Port Security, Aids to Navigation, Commerical Vessel Safety, Search and Rescue and Surveillance and Interdiction. In addition, the Coast Guard provides the preponderance of the command and control organization and facilities to direct MDZ operations. This infrastructure will support both the Coast Guard components and assigned Navy forces conducting mine countermeasures, inshore undersea warfare, explosive ordnance disposal and Naval control of shipping operating in the MDZ. Some seventy-five percent of Coast Guard personnel would be committed to MDZ duties in time of war.

SENATOR LAUTENBERG: What specific wartime missions would your 270-foot and 378-foot cutters perform, and how well are they equipped to perform those missions?

ANSWER: 270-foot cutters would perform coastal region/Maritime Defense Zone surveillance and interdiction and serve as command, control and communications platforms. 378 foot high endurance cutters would provide defense to military and mercantile convoys including underway replenishment and amphibious groups in forward areas of operations. Both classes of cutters are appropriately equipped for their assigned missions.

SENATOR LAUTENBERG: The conference report on the Continuing Resolution (p.522) directed you to consider using a portion of the Coastal Defense funds to purchase AN/SQR-17 acoustic processors (anti-submarine equipment) for your medium endurance cutters. What is the status of this procurement?

ANSWER: No action has been taken to procure AN/SQR-17 acoustic processors for our medium endurance cutters. Procurement of AN/SQR-17 acoustic processors was previously considered but, until 270-foot cutters are assigned an Anti-submarine warfare mission, the procurement of AN/SQR-17 acoustic processors is inconsistent with mission requirements.

SENATOR LAUTENBERG: Over the past 6 years, you have received more than $1 billion for equipment in Department of Defense Appropriation Acts. What are the major items of equipment that have been purchased with these funds, and how is that equipment related to your specific military preparedness missions?

ANSWER: The focus of funds provided by Department of Defense Appropriations Acts has been on drug interdiction and military readiness responsibilities. Associated spending plans have been jointly developed by the Coast Guard, Office of the Secretary of Transportation, Office of Management and Budget and Congress. All of these multi-mission capital assets have substantial military readiness and national security impact in the event of mobilization. Most of these assets have improved our peacetime drug law enforcement capabilities.

SENATOR LAUTENBERG: Is there any reason why we shouldn't assume that you will receive additional funding for your defense missions in the fiscal year 1988 Defense Appropriation Act?

ANSWER: To date no additional funding for the Coast Guard has been proposed in the deliberations on the FY 1988 Defense Appropriation Act.

REORGANIZATION/LOGISTICS

SENATOR LAUTENBERG: Last month you proposed a realignment of your management and support functions.

Would you briefly describe the changes that you intend to make, how your plan will be implemented, and the efficiencies you believe it will produce?

ANSWER: We are consolidating into two Maintenance and Logistics Commands, one in New York and the other in Alameda, California, maintenance and logistics support functions previously performed in twelve separate locations by our district offices. Concurrently, the Twelfth Coast Guard District will be combined with the Eleventh Coast Guard District, with the district office in Long Beach, California, and the Third Coast Guard District will be divided, with its northern portion becoming part of the First Coast Guard District (district office in Boston, Massachusetts) and the southern portion becoming part of the Fifth Coast Guard District

(district office in Norfolk, Virginia). The plan is being implemented in a gradual manner as personnel are transferred to the new commands, and work is being transferred accordingly from the districts. The Maintenance and Logistics Commands will be formally established on July 1, 1987. We expect the Maintenance and Logistics Command Pacific to be fully operational by October 1, 1987, and the Maintenance and Logistics Command Atlantic to be fully operational by January 1, 1987. The Third and Twelfth Coast Guard Districts will be formally disestablished on July 1, 1987, although the transfer of operational oversight for units began on April 30, and will continue over the next two months.

This realignment allows us to perform support and maintenance functions more efficiently, freeing up 500 billets formally performing support for reallocation to high priority operational requirements. It will provide a concentration of technical expertise and standardization of support.

SENATOR LAUTENBERG: Would you summarize the personnel shifts you intend to make and the impact thay will have on your military and civilian personnel in terms of positions abolished and created, reassignments, RIFs, and so forth?

ANSWER: The following chart shows the net change in military and civilian positions by geographic area.

LOCATION	NET CHANGE IN POSITIONS Military	Civilian
Boston	-35	-43
St. Louis	-43	-19
NY/Gov. Is.	+9	+105
Tidewater	-27	-26
Miami	-60	-47
New Orleans	-55	-59
Cleveland	-54	-35
LA/LB	+20	-31
Alameda	+46	+107
Seattle	-63	-41
Honolulu	-43	-24
Juneau	-49	-27

Net overall change: 397 military positions, 106 civilian positions available for reallocation from support to operational requirements. Most of the civilian positions will be converted to military positions, but overall, this is a "zero sum game."

Approximately 590 transfer of function letters were issued to civilan personnel, about 270 of which involved geographic relocation. As of May 4, 1987, 222 declined to transfer. Of these, 28 elected to retire, 71 have been placed in other positions both internal and external to the Coast Guard, and 6 have resigned. There remain about 150 civilian employees, a combination of those declining transfer and those who did not compete sucessfully for new positions in their geographic area, who will be separated if they cannot be successfully outplaced or found new jobs within the Coast Guard.

SENATOR LAUTENBERG: What impact will this have on your military personnel -- how do the increases break out between officer and enlisted personnel?

ANSWER: Of the 397 military billets which will be reallocated from support functions to operational requirements, 103 are officers and 294 are enlisted. We do not have the breakdown for the 500 operational billets at this time, as the final disposition depends on several factors, including the success of the Coast Guard Congressional Stage Budget for FY 1988, the President's FY 1989 budget submission, and the progress of the long-term procurements.

SENATOR LAUTENBERG: Your report (P.1) states that you do not intend to consolidate your financial support functions because of accounting system limitations. What are those limitations?

ANSWER: We currently have several different accounting systems in the Coast Guard that are neither uniform nor in compliance with Federal Manager's Financial Integrity Act (FMFIA) and GAO requirements. Consolidation of our accounting systems at this time would not be effective or efficient. This situation will be corrected by the implementation of the Department of Transportation's (DOT) Departmental Accounting and Financial Information System (DAFIS), a standard uniform accounting system for all DOT modal administrations.

SENATOR LAUTENBERG: And, do you eventually plan to consolidate these functions? (If so, when and where?)

ANSWER: Coast Guard personnel are actively participating in the development of DAFIS. Current estimates of delivery for this new system have the Coast Guard as the first mode coming on line in 1989. The Coast Guard will then be able to address consolidation of the accounting function.

SENATOR LAUTENBURG: Annex E of the report (p. 5) identifies certain implementation or transition costs related to the reorganization. What do you anticipate it will cost to implement this plan and how do you intend to finance this implementation in Fiscal Year 1987?

ANSWER: Implementation of the reorganization plan is expected to require approximately $10.5 million in one-time costs. This funding will be reprogrammed from savings due to lower personnel levels in Fiscal Year 1987. We started this fiscal year with about 37,400 military personnel, approximately 1,100 below our funded full time equivalent level. This shortfall in personnel was due primarily to lack of recruiting success in the previous two years. Our recruiting effort has been substantially increased in Fiscal Year 1987, followed by substantial improvement in recruiting success. We expect to be at full personnel strength by the start of Fiscal Year 1988. However, due to the low initial levels this year, we will use approximately 500 full time equivalents less than our funded levels.

PERSONNEL ISSUES

SENATOR LAUTENBERG: Last fall it was reported that you were more than 1,500 people short of your recruiting quotas. How well did you do in fiscal year 1986?

ANSWER: We fell short of our fiscal year 1986 goal of 4491 regular recruits by only 378. Concurrently we exceeded our goal of 1505 reserve recruits by more than 8 percent (we accessed 1631 reserve recruits).

SENATOR LAUTENBERG: Last September it was reported that in fiscal year 1987 you needed to recruit 7,500 people, which is nearly 3,000 recruits above your 1986 level. Is 7,500 recruits a realistic goal?

ANSWER: Given the budgetary and personnel resources we reprogrammed to our recruiting effort during fiscal year 1987, we now have an organization in place capable of attaining our annual regular and reserve recruit targets. Based on our manpower analyses, we feel this objective is realistic and attainable.

SENATOR LAUTENBERG: And, will the quality of personnel suffer as you increase the number of recruits?

ANSWER: Initially, to redress our immediate personnel shortages, we had to accept more non-high school graduates than we would have preferred. However, the success of our increased recruiting efforts is enabling us to be more selective now.

SENATOR LAUTENBERG: How well have you done in your recruiting efforts during the first six months of this fiscal year compared to your goal?

ANSWER: To date we have kept pace with our quarterly regular enlisted goals and in fact we are slightly ahead of our projections. We are somewhat behind our reserve recruitment target but fully expect to achieve our goal by year's end.

SENATOR LAUTENBERG: You said last July that almost every unit in the Coast Guard was short of non-rated people (Commandant's Bulletin 7-18-86). Is this still the case, and how have these shortages affected your ability to perform your missions -- especially your drug enforcement mission?

ANSWER: Shortages that exist impact all mission areas. When these shortages are realized on a unit which is engaged in drug interdiction operations, it is simply forced to do without in some area (perhaps the ship's maintenance will suffer or the number of hours on watch each day increase). Safety of our boarding teams will not be compromised, however, and complete teams will always be used.

SENATOR LAUTENBERG: Last year, it was indicated that you were losing aviators at a rate that is about 3 times higher than your five-year average. To what extent is this problem continuing, and what impact is it having on your operations?

ANSWER: In fiscal year 1986 we had 51 aviators (Lieutenant Commander and below) depart the service; primarily due to intensive commercial airline recruitment. To date this year we've lost 58 (LCDR and below) and expect to lose a total of 62 or 63 by the close of the year. We anticipate this situation continuing for the next couple of years given projections of commercial airline needs for pilots.

During the upcoming summer the shortage of pilots will be exacerbated by temporary billet vacancies related to necessary transfer of personnel. In a few cases, flight hours at some air stations will be reduced. However, these reductions will be kept to an absolute minimum and primarily impact secondary mission areas.

SENATOR LAUTENBERG: Last year it was indicated that you believed your drug testing program was having a positive deterrent effect despite the fact that the number of drug related discharges had increased from fiscal year 1984 to 1985. What does your current drug testing program involve, and to what extent do you believe it is reducing drug abuse among your personnel?

ANSWER: Our program tests for 7 drugs, primarily through random testing. All Coast Guard units test at least 100 percent of their population each year. Entry level testing and testing of Reserves are also performed.

The rise in drug related discharges can be attributed to standardized and more effective test methods introduced in 1985, and changes in discharge policies late in fiscal year 1984.

Prior to the standardization of testing, our servicewide average was approximately 50 positive tests per 1000 test samples. The positive test rate has dropped to 35 per 1000 since servicewide standards were applied. These standards will become more stringent beginning in fiscal year 1988 in response to testing improvements and the HHS technical guidelines. We expect that advance announcement of these stricter standards will provide an additional deterrent effect on those personnel presently not being detected.

SENATOR LAUTENBERG: How many alcohol and drug related discharges have you ordered in fiscal years 1984, 1985, and 1986?

ANSWER: 519, 566, and 482 discharges respectively for drug abuse were ordered in 1984, 1985, and 1986. "Alcohol" discharges were not designated as such prior to fiscal year 1987 and therefore no statistics are available for fiscal years 1984 through 1986.

SENATOR LAUTENBERG: And, how many so far in fiscal year 1987?

ANSWER: 57 dicharges for alcohol abuse and 193 discharges for drug abuse have been ordered as of 1 MAY 1987.

SENATOR LAUTENBERG: There have been some reports that some non-prescription medicines and some foods can cause drug tests to show "false positives". How do you ensure that the results of your drug tests are accurate?

ANSWER: To ensure accuracy of the tests themselves, the Coast Guard and its laboratory use stringent collection, chain of custody, and quality assurance procedures. For all samples that screen positive, we use confirmatory testing by the most accurate method available today. Unit commanders have access to medical personnel and expert witnesses to explore issues of "false positives" when they arise. We require our personnel to list all medications they have taken recently when they are called for drug testing.

SENATOR LAUTENBERG: To what extent is alcohol use still a problem area in the Coast Guard?

ANSWER: We cannot define the extent of off-duty alcohol use in absolute numbers. We believe it to be the same as found in comparable age groups within the general population. Alcohol abuse is being combatted through awareness and education efforts, and discharge of repeat offenders. Members diagnosed as alcoholics and possessing high potential for further useful service are treated at Navy facilities and assisted with beginning a lifelong alcohol abstinence program. Alcoholics who do not qualify for treatment are discharged and referred to the Veterans Administration.

A-76 CONTRACTING

SENATOR LAUTENBERG: You are again showing some savings in your budget as a result of contracting out certain functions to private industry. How many civilian and military positions have you eliminated in the last three years as a result of your A-76 reviews, and what dollar savings have been realized?

ANSWER: From its beginning in 1984 until December 31, 1986, the U.S. Coast Guard's A-76 Program has completed 54 reviews of commercial activities. A total of 271 civilian positions have been reviewed and 109 were eliminated as of December 31, 1986. Likewise, 784 military billets were reviewed and 500 were eliminated in this period. The cost savings for this same period were $13.7 million for the Federal Government (using the cost model of the A-76 Circular). However, the budget savings to the Coast Guard have been a negative $500 thousand because of unfunded retirement costs, unfunded cost of capital equipment, Federal Income Tax, contract modification costs, and the fact that the actual savings come years after anticipatory budget cuts.

SENATOR LAUTENBERG: Last year you estimated fiscal year 1987 reductions of 161 military and 70 civilian positions as a result of A-76 contracting out. Will you realize these projected personnel savings?

ANSWER: During the remainder of FY 1987 several of our large facilities maintenance and industrial reviews will be completed. Therefore, we do expect to realize our FY 1987 projected reductions.

SENATOR LAUTENBERG: How many positions and dollars do you expect to save in fiscal year 1988 as a result of A-76 reviews?

ANSWER: The Coast Guard's A-76 schedule for FY 1988 is to review 580 positions and billets with an expected savings of approximately 170 people. Because of outside influences over which the Coast Guard has no control, A-76 reviews are very prone to delays. Actual reduction of people lags the decision to contract or keep in house by many months.

SENATOR LAUTENBERG: And are you confident that you can achieve those savings?

ANSWER: I am reasonably confident that a decision to contract or not, will be reached on approximately 170 people, but I am doubtful that final personnel actions will be completed by the end of the fiscal year.

SENATOR LAUTENBERG: Last year, you told the House Subcommittee that you were about to award a demonstration contract for the servicing of your aids to navigation. What is the status of this test of contractor maintenance?

ANSWER: Contracts have been awarded in two of the five designated trial waterways. The contractor for the Merrimack River/Ipswich Bay, Massachusetts area started work in late February, 1987. The contractor for the Snake/Willamette Rivers, Oregon area began work March 1, 1987. An award to a contractor for the New Jersey Intra-coastal Waterway is scheduled for May, 1987. A solicitation for bids has been issued for the Sacramento and San Joaquin Rivers, California. The solicitation for the Virginia Inside Passage is under review and should be issued this summer.

SENATOR LAUTENBERG: How much does it cost the contractor to maintain these aids as compared to your costs?

ANSWER: In the two contracts that have been awarded, the contractors' costs are higher than the estimated Coast Guard costs to service the same aids to navigation. The contract costs for the Merrimack/Ipswich Bay, Massachusetts area are approximately $136,000/year higher. The Snake/Willamette, Oregon waterways will cost $43,000/year more under the contract. The New Jersey Intracoastal Waterway contract, tentatively scheduled for a May 1987 award, will be approximately $31,000/year higher. These figures all represent the differential for the first year of the contracts. These contracts were awarded despite being higher than the estimated Coast Guard costs in order for the Coast Guard to determine the capability of contractors in aids to navigation servicing and to measure cost trends over the contract life. Bids for the remaining two waterways in the trial have not yet been received.

SENATOR LAUTENBERG: Last year, an Inspector General's report called on you to refer additional search and rescue cases to commercial firms. Has this issue been resolved, and what percentage of your search and rescue cases is currently being referred to private contractors compared to previous years?

ANSWER: The Inspector General's audit of the Search and Rescue (SAR) program recommended that the Coast Guard issue additional instructions to our units to ensure a more effective implementation of Coast Guard policy for non-emergency cases. The Coast Guard had issued new instructions to its units on June 20, 1985. This satisfied the recommendation of the audit.

The search and rescue database shows that five percent of all Coast Guard cases were referred to commercial firms during FY86. This statistic compares to four percent commercial activity in FY85, and about two percent in FY 84.

SENATOR LAUTENBERG: The report states that materiel inventory valued at over $50 million was never physically counted and $7.3 million of inactive materiel was stocked. Previously, the IG had reported that at your "Aircraft Inventory Control Point" you had inventory valued at about $44 million that was not needed or could not be used. What is your timetable for correcting these problems in Inventory Management?

ANSWER: Significant progress was made during fiscal year (FY) 1986 to improve inventory management at our inventory control points (ICP's).

Brooklyn Supply Center scheduled physical inventories with emphasis on large volume and high value items. Additional resources were temporarily added to the inventory section to assist in reconciliation of inventory records. Quality assurance computer checks to match issue and shipment documents were installed. This resulted in identification of $1.189 million of obsolete or excess stock, a 50 percent increase from the prior year, which was removed from inventory. As a result, warehouse space was reduced by 80,000 square feet over the past two years.

The aircraft inventory control point reviewed all Coast Guard peculiar and other Government agency items on hand and assessed appropriate stock retention levels. Required supply management training was accomplished and inventory managers were reorganized on the basis of aircraft type instead of supply commodities. Obsolete or excess stock in the amount of $9.534 million was identified and removed from inventory.

A physical inventory of stock at the ships inventory control point resulted in identification and removal of $2.332 million of obsolete stock. Reconciliation of stock on hand with inventory records is complete except for 58 line items. The remaining stock is necessary for retention levels or will be drawn down by attrition. A review of insurance items has also been completed and required levels identified.

Although significant progress has been made in the reduction of obsolete and excess stock, the number of line items and total value of stock on hand have not decreased. Decreases have not been realized for several reasons: (a) new vessels, aircraft and equipment coming on line require stocking of higher value items; (b) we must continue to maintain full stock for the older vessels, aircraft and equipment even as the newer resources come on line; (c) we are doing a more thorough job of stock support for the new resources; and, (d) there is no direct correlation between value of stock excessed and number of line items removed.

SENATOR LAUTENBERG: The FAA has installed an expensive new Computerized Inventory Control System at its Oklahoma City Depot. To what extent have you consulted with them to use their expertise and perhaps even lease their services?

ANSWER: Coast Guard representatives visited the FAA warehouse facility on 11 and 12 February 1987 to discuss their ability to absorb a portion of our current inventory and projected costs. The inventory being considered for relocation is currently located in a GSA leased warehouse in Brooklyn, New York. FAA personnel visited this facility in March 1987 to determine what services they can provide; they are preparing a cost proposal. Presently, we are conducting an economic analysis and evaluation of the feasibility of integrating the two systems.

SENATOR LAUTENBERG: Please provide for the record an explanation of the improvements you expect to make in managing your inventory in the coming year.

ANSWER: Continued emphasis will be placed on the review and physical inventory of large volume and high dollar value line items including project specific materiel, identification and disposal of obsolete and excess materiel and reconciliation of items not found in the warehouse but still on stock records. Additionally, we are working on enhancements to our information management system which, when completed, should improve inventory management oversight. Efforts are also underway to expand the use of Navy Stocking Facilities in place of smaller Coast Guard storage areas that lack warehouse professionals.

ACQUISITION REFORM

SENATOR LAUTENBERG: In the past, your procurement has been plagued with problems. Last year, you established an Office of Acquisition to oversee your major procurements. What procurements is this office managing, and what ones has this office had?

ANSWER: The Office of Acquisition is managing the following major acquisitions:

Aerostat — Procure at least 5 aerostat borne radar systems.

Polar Icebreaker Replacement — Acquire Wind Class replacement of polar icebreaker capabilities ... considering lease vs. buy option.

Patrol Boat Replacement (WPB) -- Acquire replacement for existing deteriorated patrol boats. Includes 3 cutter types: Island Class, Heritage Class (CG design) and Advanced Marine Vehicle.

270' Medium Endurance Cutter (WMEC) — Complete acquisition of fleet of 13 270' WMECs and associated support systems and equipment.

Air Interdiction Systems -- Acquire systems to interdict airborne drug traffic.

378' High Endurance Cutter, Fleet Renovation and Modernization (WHEC FRAM) — Complete major overhaul and capability improvement of 12 WHEC 378' cutters.

Medium Range Recovery Replacement Helicopter (MRR) — Replace aging MRR (HH-3F). Joint procurement with Navy combat Search and Rescue (SAR) helo.

44 FT Motor Lifeboat (MLB) — Replace 44 ft motor lifeboat.

Offshore and Coastal Buoytender (WLB/WLM) Capabilities Replacement — Replace the overage/obsolete WLB/WLM buoytender fleet.

Helicopter Operated Shipboard Tiedown System (HOST) — Acquire passive helicopter operated system allowing helicopter to land or take off without exposing flight deck crews to hazards.

140' Icebreaking Tugboat — Construct icebreaking tugboat #109.

Fast Coastal Interceptors — Acquire Four. Under contract now.

SENATOR LAUTENBERG: This office is also responsible for requirements and specification writing. Has it completed the development of the requirement for major acquisition during the past year? If so, which ones?

ANSWER: Yes. Requirements have been developed for the Medium Range Recovery Helicopter (MRR), the 44 ft Motor Life Boat (MLB) replacement, the Polar Icebreaker and the Aerostat.

SENATOR LAUTENBERG: Last June, the GAO reported on the status of your acquisition reform actions. That report stated that while you have made some progress in reorganizing your acquisition function, little progress had been made in developing an effective management information system or in addressing training deficiencies cited in the two studies you conducted for your acquisition process. What action have you taken in the past year to develop a management information system and to improve training in this area?

ANSWER: The development and maintenance of the Acquisition Management Information System is an iterative process which has focused on providing as rapidly as possible the most critical elements of the information system as well as careful overall system design to provide a complete, integrated system in the long term. Many components of the system are operational and progress to date includes:

A dedicated MIS staff has been established that is responsible for designing and implementing the MIS for major system acquisition projects and procurement.

A MIS/ADP plan has been developed and approved that outlines architectural strategy, policy, and general process for implementing the MIS.

Prototype software has been developed or procured for applications including: Basic Project Management
Budget Resource Projections
Word Processing
Business Graphics
Technical Reference Library

We are currently evaluating various automated contracting and project management systems. Procurement action is in progress to procure a commercially available automated contract tracking and solicitation production system with contract award anticipated prior to the end of fiscal year 1987.

Formal analysis of the Office of Acquisition's long term information needs in progress using methodologies such as critical success factor analysis (Rockhart, MIT, CISR) and Structured Analysis and Design (Yourden and DeMarco).

Substantial training has also been accomplished since the office was established. As of mid-April, we have utilized over 260 quotas and completed over 1000 man-days of training. A coordinator has been designated who has developed a database for tracking training requirements, accomplishments and sources. We are in the process of identifying standard training requirements for each position. A training plan for project, contracting and technical personnel has been established. Two quotas annually have been obtained from the Naval Post Graduate School for procurement management. A training agreement has been entered into with Defense Systems Management College (DSMC). Joint training is being coordinated with OST. This office's first new project manager commenced a 20 week project manager course at DSMC in January 1987. Other agency and private training sources are being catalogued and utilized.

SENATOR LAUTENBERG: What is the status of the IG and GAO proposals to expand OST involvement in your procurement process -- for example, streamlining the source selection procedures?

ANSWER: Officials of the Office of Acquisition within the Coast Guard and staff members from the Office of the Secretary of Transportation meet bi-weekly to review the status of initiatives developed to enhance the procurement process and weekly to review the status of major projects. In addition, designated points of contact have been identified within OST and USCG for all major projects and a free and frequent information flow has been encouraged. OST and USCG have been working closely since September 1986 to develop a streamlined source selection process to reduce procurement leadtimes by over 50%. We anticipate implementation of that process on several pilot projects during the Spring 1987. An automated system for initiation and tracking procurements is being developed to enable electronic transfer of status information to OST to further enhance OST/USCG cooperation in the procurement process.

SENATOR LAUTENBERG: Do you have an integrated standardized information system for project management? If not, when do you expect to have such a system implemented, and how are you presently managing project information?

ANSWER: The development and maintenance of the Acquisition Management Information System is dynamic, requiring continual review and reevaluation of requirements. Thus, while at this stage it is premature to estimate a fully completed date, various project management components of the system are operational and progress to date includes the following:

The requirements to satisfy fundamental office automation, desk top computing and mini-computer access needs have been determined. Necessary workstation and mini-computer hardware has been procured and installed.

Basic project management is being accomplished using off-the-shelf networking software running on micro computers, as well as prototype project management and budget applications on a minicomputer.

Procurement action is in progress to acquire a commercially available and supported automated contract tracking and solicitation production system. The contract award is anticipated prior to the end of fiscal year 1987.

Within the next year, we will commence the acquisition of off-the-shelf sophisticated networking software to run in a mini-computer environment. This software will provide comprehensive, detailed project management capability.

Formal analysis of the Office of Acquisition's long term information needs is in progress using methodologies such as Critical Success Factor Analysis (Rockhart, Massachusetts Institute of Technology) and Structured Analysis and Design (Yourden and DeMarco). This will define the database applications necessary to complement and integrate information contained in the network and contract management applications.

RESERVE TRAINING

SENATOR LAUTENBERG: You are proposing to increase your Selected Reserve by 750 personnel in fiscal year 1988. At the same time, you are proposing reorganizations of your regular force to create more operational positions. Why do you believe that an increase of 750 personnel will be more useful in your reserve than in your regular force?

ANSWER: The increase of 750 reservists is not intended to replace the active duty personnel who are needed to perform high priority peacetime missions. These reservists will be used to increase Coast Guard readiness to perform wartime missions. Upon mobilization, the size of the Coast Guard will greatly expand whereupon these additional reservists will be used as part of the force performing port security in protection of our nation's strategic ports. These trained reservists are also available and prepared to support the Coast Guard for contingency and emergency operations. This capability from reserve members, who perform their training duty on one weekend per month plus two weeks active duty annually, is provided at a fraction of the cost of active force members who are on duty 365 days a year.

SENATOR LAUTENBERG: According to a recent IG report, you need to improve the quality as well as the quantity of your reserve. The IG states that 59 percent of your mobilization billets were filled with unqualified or partially qualified personnel in fiscal year 1985. The IG report also states that the logistical requirements of the reserve are not being effectively addressed. The IG indicates that these conditions are similar to those found by the IG and the GAO in 1982. What measures are you going to take to address these reserve training and logistical problems?

ANSWER: As we stated in our response to the IG report findings, it is important to note that 80 percent of the Selected Reserve personnel were qualified for their mobilization assignments in 1985 -- 41 percent fully qualified and another 39 percent minimally qualified. We are not satisfied with even an 80 percent qualification rate, however, and have begun a systematic effort to ensure our qualification standards are realistic and our training requirements for each mobilization billet are valid. We expect to see an improved qualification rate in fiscal year 1988 as a result of these initiatives.

The first step of our effort to effectively address logistics requirements for the mobilized force was recently completed with the development and publication of the Coast Guard's Logistics Support and Mobilization Plan (LSMP). That Plan incorporates field unit requirements for supporting the reserve force upon mobilization. Our input regarding major requirements has been provided to the Department of Defense for inclusion in its Annual Report to the Congress on the status of Guard and Reserve equipment.

SENATOR LAUTENBERG: What do you believe has been the most significant accomplishment in your reserve training program during the past year?

ANSWER: There were two significant accomplishments this past year by the Coast Guard Reserve. One was Reservist support of activities for Liberty Weekend in New York Harbor and the other was Search and Rescue support following the space shuttle Challenger explosion.

Over five hundred Reservists provided water borne and shoreside safety and security patrols for the international flotilla of tall ships and the hundreds of boats that flocked to the event. The duties and responsibilities performed were closely aligned with the Reservists' wartime mission of Port Security.

Reservists were among the first to arrive on scene following the Challenger explosion to search for possible survivors. During the days that followed, Reservists were involved in the arduous recovery mission requiring patrols, recovery of debris, and maintaining security in the recovery operation areas.

The above examples demonstrated the ability to: mobilize for large scale public events; provide for public safety and security; provide instantaneous response to disasters; and mesh real-life training and hands-on work in areas closely aligned with wartime missions.

RESEARCH AND DEVELOPMENT

SENATOR LAUTENBERG: Less than one percent of your fiscal year 1988 budget request is for research and development. What is your view of the role of your research and development program, and do you believe that your fiscal year 1988 request is adequate to fulfill your mission requirements?

ANSWER: The Coast Guard research and development program seeks solutions to current and anticipated problems by applying existing or emerging technology. The program develops, tests and evaluates hardware, software, systems and techniques for potential Coast Guard use. We take risks we might not take with our other appropriations. Our FY 1988 funding is adequate for all high priority and high payoff projects.

INSPECTOR GENERAL

SENATOR LAUTENBERG: In the March 1986 semiannual report of the IG, it was indicated that you had not recovered approximately $59 Million of federal funds spent on oil pollution cleanup. The IG recommended that you propose increasing liability limits and place more emphasis on identifying violators and enforcing civil penaly and criminal prosecution provisions. What actions have you taken in response to the IG's recommendations?

ANSWER: A. The Coast Guard is developing an automated 311(k) Pollution Fund tracking system which will track cases from beginning to end. Case documentation will be computerized to shorten the processing time. The Coast Guard will also utilize Dunn & Bradstreet's database to aid in the evaluation of the responsible party's ability to pay. Increasing the cost recovery rate is a long term process since cases may be 6 years old before they are closed. Major objectives are to speed up this process and increase coordination of cost recovery actions among Coast Guard elements (program, finance, and legal), the U.S. Environmental Protection Agency, and the U.S. Department of Justice.

B. The Coast Guard agrees that the limits of liability are too low. Proposed comprehensive oil spill liability and compensation legislation, supported by the Administration, would correct this. The proposed fund would be supported by a 1.3 cent per barrel fee on imported and exported oil versus general revenue funds.

SENATOR LAUTENBERG: What percentage of your pollution clean up costs are being recovered and to what extent have you been able to increase this percentage?

ANSWER: The Coast Guard's objective is for spills to be cleaned up by the responsible party and the Coast Guard has been successful for most incidents. Only 22% of all oil spills (11 year average) require federal funds to be spent. Approximately half of the spills cleaned up with federal funds are mystery spills due to unknown responsible parties. Also, some spillers are bankrupt and are unable to pay the cleanup costs. Approximately 50% of the funds spent are recovered. As previously mentioned, increasing the cost recovery rate is a long term process and no measurable trend has occurred since the IG audit.

SENATOR LAUTENBERG: The IG also had issued a report concluding that you did not need a fifth icebreaker. According to the IG, you did not agree with this conclusion. How has this issue been resolved?

ANSWER: The Coast Guard maintained that four active and one reserve icebreaker were required. Our position held that the age and declining reliability of our older ships (which represented 60% of our fleet) required "insurance" against an active icebreaker being placed out of service unexpectedly. We thought the best form of insurance was an operable, but inactive, fifth icebreaker. The IG disagreed.

The Department of Transportation eventually settled the dispute by agreeing that because three of our five icebreakers were operating beyond their designed service lives, the Coast Guard's position was prudent.

As it turns out, the USCGC GLACIER, one of our four currently active ships, will be decommissioned this summer due to structural deficiencies that reduced the ship's capabilities to that of an ice-strengthened vessel. Repairs to restore GLACIER's icebreaking capability would be uneconomical. The USCGC WESTWIND will be reactivated this summer to bring the fleet to four active icebreakers with none in reserve.

SENATOR LAUTENBERG: According to your budget justifications you had 731 icebreaker deployment days in 1985 (FY '87, Part 1 - p. 31) compared with 534 days in 1986 (FY '86 Just. - p. 16). To what extent does this 27 percent reduction in polar icebreaker deployment days reflect a reduced requirement for icebreaking?

ANSWER: None. Short term increases and decreases in actual icebreaker usage are not sufficient reason to increase or decrease the size of our icebreaking fleet. Rather than rely on immediate past usage to determine icebreaking requirements, we rely on the mid and long term projections of the demand that other federal agencies have for icebreakers. The use of icebreakers by other federal agencies account for about 80% of the icebreaker deployment days. Current Coast Guard and OST projections still show a requirement for at least four icebreakers.

SENATOR LAUTENBERG: I understand that there have been significant problems in your planning effort to replace your 53 82-foot patrol boats and 22 95-foot patrol boats. This procurement will cost $600 million to $800 million over the next decade. Last year your predecessor indicated in testimony that you were designing the new "fully capable" boats for a maximum speed of 30 knots, endurance of 5 days, and a range of 1,680 nautical miles. The high speed was considered necessary for drug interdiction. Are those still the characteristics you consider essential to a "fully capable" patrol boat? If not, why not?

ANSWER: The required operating characteristics of the "fully capable" (now called the Heritage Class) are essentially unchanged except that the nominal range has been changed from 1,680 nautical miles to 1,400 nautical miles to reflect planned operating scenarios.

SENATOR LAUTENBERG: Isn't it rather late in the acquisition process to embark on a redesign of your "fully capable" patrol boat? Why weren't these issues considered earlier in the acquisition process?

ANSWER: The development of vessels is traditionally viewed as a "design spiral" in which the design is successively checked, upon the completion of each iteration, against current operational requirements. Designs go through iterations of greater detail at each level in anticipation of adjustments to the design and to minimize the investment. The changes so far in the Heritage Class patrol boat reflect refinements based on the Coast Guard's recent experience operating new patrol boats in law enforcement operations.

SENATOR LAUTENBERG: What is your current timetable for procuring the "fully capable" patrol boats and how does that compare to last year's schedule?

ANSWER: The timetable for acquisition of the Heritage Class, formerly "fully capable", patrol boats, has been adjusted to reflect recent experience complying with the requirements of the Competition in Contracting Act (CICA) of 1984. The current procurement milestones and those provided last year are as follows:

SCHEDULE OF MILESTONES

Task	Current/Last Year's Completion	
APPROVAL OF MISSION NEED STATEMENT	5 Oct 83	5 Oct 83
KEY DECISION ONE/APPROVAL OF ACQUISITION PAPER (Authorization to Explore Alternative Systems)	7 Oct 85	7 Oct 85
KEY DECISION TWO/WAIVER BY OST BASED ON 2ND ITERATION OF CANDIDATE CRAFT STUDY (Select Systems for Demonstration Validation)	6 Jul 87	7 Jul 86
Prepare Conceptual Design	7 Jul 86	2 Jul 87
Prepare Preliminary Design	31 May 87	9 Dec 87
Prepare Contract Design & Specifications	6 Jun 88	6 Jun 88

KEY DECISION THREE/APPROVAL OF ACQUISITION PAPER UPDATE (Commitment of Full Scale Development & Limited Production)	6 Jul 88	6 Jul 88
Award Contract for Detail Design & Limited Production Craft	1 Jul 89	31 Dec 88
Complete Detail Design & Construct Limited Production Craft	1 Oct 90	31 Dec 90
Conduct Technical & Operational Evaluation	1 Oct 91	26 Dec 91
KEY DECISION FOUR/APPROVAL OF ACQUISITION PAPER UPDATE (Commitment to Full Scale Production)	1 Nov 91	4 Jul 92
Award Production Contract	1 Dec 92	31 Dec 92

SENATOR LAUTENBERG: Please explain for the record why the original mission need statement for the "fully capable" patrol boat was not drafted in specific enough detail to prevent the design of a boat that was later determined not to be sufficient to meet mission requirements.

ANSWER: The cornerstone directive for major systems acquisition, OMB Circular A-109, states that "When analysis of an agency's mission shows that a need for a new major system exists, such a need should not be defined in equipment terms, but should be defined in terms of the mission, purpose, capability, agency components involved, schedule and cost objectives, and operating constraints. A mission need may result from a deficiency in existing agency capabilities or the decision to establish new capabilities in response to a technologically feasible opportunity. Mission needs are independent of any particular system or technological solution." In short, the Mission Needs Statement (MNS) is a broad statement of a requirement and, in the case of the patrol boat replacement project, has remained unchanged since its approval in 1983.

Within the umbrella of the MNS, the Coast Guard develops in-house documents called Sponsors' Requirements Documents (SRDs) which refine the MNS and can be more responsive to "lessons learned" from operations. The initial Heritage Class design met the requirements of the MNS. It did not match all of the operational requirements of the SRD; therefore, it was revised.

SENATOR LAUTENBERG: Although your plans last year called for only 14 Island Class Patrol Boats the Navy bought you 16... Why do you need 37 ISLAND Class boats?

ANSWER: The 37 ISLAND Class patrol boats replace the oldest of our current fleet of Patrols Boats (WPB's), the 95 foot cutter. These vessels were introduced into the fleet starting in the early 1950's.

By 1990 the vessels will average 35 years of service and will be beyond their economic service life. There were 23 95 foot WPB's when we began this procurement, plus 2 medium tugs (WYTM's) that were being used as WPB's. The differential between this inventory and the 37 ISLAND Class being procured represent the 13 patrol vessels funded by Congress to step up the tempo of our drug law enforcement operations in the Southeast U.S.

SENATOR LAUTENBERG: Last year, your predecessor expressed concern before the House Subcommittee about the thin hulls of the Island Class boats, which he said were even lighter than those on your old 95-foot boats. I believe the Naval Sea Combat Systems Engineering Office also has advised you to avoid high speed operations in high seas because of this problem. How serious is this problem in you view?

ANSWER: Last spring we requested the U. S. Navy to examine the bottom structure to determine the boats' maximum operating envelope in very high sea states. Their analysis indicated that operating these craft beyond their operating envelope could cause deformations in the bottom plating which would reduce their maximum potential speed. Their concern was over a possible loss of capability and not a safety issue. However, all bottom plating deformations observed so far during dry-docking are within manufacturing tolerances.

Recently, a few very small cracks did occur in the bow above the waterline (a completely separate area of the hull from the Navy analyzed portion) of three boats operating out of Puerto Rico. They were minor in nature, did not affect the integrity of the vessels, and were promptly fixed by the builder at no cost to the Coast Guard. A modification of the design will be incorporated in the construction of all boats to prevent this problem from recurring. The Coast Guard does not see the "light" hulls on the Island Class Patrol Boat as a problem.

SENATOR LAUTENBERG: Will there be higher maintenance costs for the Island Class boats than for either your current patrol boats or your new "fully capable" boats? If so, approximately how much and why?

ANSWER: The Coast Guard is currently programming approximately 20% more for the maintenance of Island Class than for other patrol boat classes. The funding level is based on an algorithm which accounts for their increased tempo of operation and for their relatively greater horsepower and displacement as compared to our other patrol boats.

Most significantly, the increased tempo of operations in response to the current drug interdiction initiatives, contributes to more hours underway per year resulting in higher maintenance.

Maintenance costs for Heritage Class patrol boats should be comparable to those for existing patrol boat classes because of their planned heavier construction and reduced horsepower in the smaller engines.

SENATOR LAUTENBERG: According to information provided last year, in the House Hearings, you only expect a 15 year service life for the Island Class Boats. How does this compare to the planned service life for the "fully capable" boats?

ANSWER: The requirements in the original solicitation package for the procurement of the Island Class patrol boats specified that the craft would be designed for at least a fifteen year service life. Long term Coast Guard plans are based on a fifteen year service life for this cutter class.

The Heritage Class is being designed for a twenty-five year service life.

SENATOR LAUTENBERG: Please provide for the record a breakdown comparing the expected life cycle construction, operating, and maintenance costs for each vessel type under your patrol boat replacement program.

ANSWER: The Patrol Boat (WPB) replacement program life cycle cost estimates are based on the Coast Guard's CASHWARS costing model with input on construction costs from the U.S. Navy's ASSET cost estimating model. A breakdown comparing the expected life cycle construction, operating and maintenance costs in FY-87 dollars for each candidate vessel type under consideration for the patrol boat replacement program is as follows:

EXPECTED LIFE CYCLE COSTS PER VESSEL
(Dollars in Millions)

	Acquisition Cost	Cost to Extend Service Life to 25 yrs.	O&M*** (over 25 years)
Heritage Class	$5.4-8.0 (est)	$0.0	$15.7
Island Class	$5.0-5.2 (actual)	$3.8-4.6 (est)	$18.0
Advanced Marine Vehicle (*)			
SWATH***	$6.0-9.0 (est)**		$13.4 (est)
Hydrofoil	$14.9-22.3 (est)		$20.9 (est)
SES***	$6.4-9.6 (est)		$16.2 (est)
Planing Hull	$7.4-11.2 (est)**		$15.4 (est)

* Only one Advanced Marine Vehicle (AMV) type will be selected for development and potential inclusion in the patrol boat mix.

** Acquisition costs are adjusted to reflect salvage value of craft with 25 years design life operated for 20 year period.

*** O&M = Operating and Maintenance
SWATH = Small Waterplane Area Twin Hull
SES = Special Effect Ship

SENATOR LAUTENBERG: Last year, your predecessor told the house subcommittee that the Island Class Boat does not meet a wide range of mission performance requirements. What patrol boat missions can't be performed with Island Class Boats -- how restrictive are the capabilities of this Boat? Please expand on your answer for the record?

ANSWER: The Island Class patrol boats were originally selected in 1983 to respond to the Vice-President's Drug Initiative in the Southeast United States (SEUS). As such they are essentially single mission craft optimized to perform the Coast Guard's Law Enforcement mission. Coast Guard craft, including patrol boats, are traditionally multi-mission platforms which provide the most economic solution to the Coast Guard's varied responsibilities with acceptable compromises in the ability to conduct any single mission. Island Class patrol boats, as currently operated, lack sufficient reservations for the weight growth anticipated with the weapons and sensors necessary to meet the Coast Guard patrol boats' role in the Maritime Defense Zone (MDZ). The lack of weight margin to install MDZ mission support systems, is the chief disadvantage of the Island Class as fleet wide replacement patrol boats.

PATROL BOAT REPLACEMENT

SENATOR LAUTENBERG: How well does the Island Class boat fulfill the drug interdiction mission compared to what your existing boats can do, and also to what your planned "fully capable" boats will do?

ANSWER: We are very pleased with the initial operation of the Island Class patrol boat. As with any new asset some problems have been encountered. We are working the problems out and expect the Island Class patrol boat will fill all mission requirements.

SENATOR LAUTENBERG: It has been alleged that the Island Class boat design is over 20 years old and obsolete. How do you respond?

ANSWER: The first craft built to the Vosper Thornycroft design, upon which the Island Class is based, were placed in service in 1972. In procuring the Island Class, the emphasis was on obtaining proven, reliable patrol boats in the shortest possible time. U.S. shipyards competing for the original construction contract were required to offer craft, of their own design or under license, which had been proven in patrol boat services. The hull form and drive train had to be identical to the "parent craft" while the design of the remainder of the boat could be modified to meet the Coast Guard's performance requirements specified in the solicitation package. The Island Class contract resulted from that procurement philosophy.

Many recent designs for comparable small craft are based on a deep vee hull form. The deep vee designs, such as the Coast Guard's "Heritage Class," offer potential construction savings by using a simpler hull form with comparable performance characteristics. Round bottomed, semi-displacement designs, such as the Island Class, are still being designed and built and, despite the development of the deep vee, are not considered obsolete. Both hull forms have merits and disadvantages as well as proponents in the boat design and construction fields.

SENATOR LAUTENBERG: How many Island Class boats are currently in service and what has been your operational experience to date?

ANSWER: Fifteen Island Class patrol boats have been delivered and thirteen have been in operation for at least 3 months. The first boat delivered has been in operation for 14 months. The Island Class patrol boats have proven themselves superior to the Point and Cape Class patrol boats for law enforcement operations. Overall the Island Class patrol boats have been either underway or available for operations 50% of the time since delivery. We expect this to increase to a planned availability of 55% within a year after delivery as initial problems are worked out.

SENATOR LAUTENBERG: Please expand on your answer for the record reviewing the operational performance of each Island Class boat that has been delivered to date.

ANSWER: The majority; cutters FARALLON, MANITOU, MATAGORDA, MAUI, MONHEGAN, NUNIVAK, OCRACOKE, and VASHON; are operating in the SEUS and Caribbean maritime regions and have been especially successful in performing law enforcement missions. The boats assigned to Alaska and Maine (CGCs MUSTANG, NAUSHON, and SANIBEL) have experienced some problems with interior heating and insulation in the winter due to the warm weather emphasis of the design. Several Island Class patrol boats experienced cracking in the bow after operations in heavy seas. Since this problem was covered under warranty, the contractor strengthened the bow to fix the problem. Other small items have been corrected and as noted we expect to achieve a planned availability of 55% within a year after delivery. The following table lists the availability of each boat since delivery:

NAME	HULL NO.	AVAILABILITY (%)
FARALLON	1301	51
MANITOU	1302	46
MATAGORDA	1303	44
MAUI	1304	39
MONHEGAN	1305	52
NUNIVAK	1306	57
OCRACOKE	1307	56
VASHON	1308	48
AQUIDNECK	1309	40
MUSTANG	1310	57
NAUSHON	1311	64
SANIBEL	1312	48
EDISTO	1313	64
SAPELO	1314	Data not available yet.
MATINICUS	1315	Data not available yet.

PASSENGER VESSEL SAFETY

SENATOR LAUTENBERG: Over the past years, what efforts has the Coast Guard undertaken to enhance the level of passenger safety aboard U.S. passenger vessels in the areas of lifesaving devices, crew training, equipment standards, navigation equipment, and vessel stability?

ANSWER: The Coast Guard has separate sets of regulations governing passenger vessels (at least 100 gross tons and carrying at least one passenger for hire), and small passenger vessels (less than 100 gross tons and carrying more than 6 passengers).

We are actively working on revised lifesaving regulations to improve passenger safety on both categories of passenger vessel.

The Coast Guard has initiated a rulemaking to rewrite 46 CFR Subchapter "T", the Rules and Regulations for Small Passenger Vessels. This rulemaking will include a complete review and overall modification of the regulations to reflect changes in our statutory authority, advances in technology and vessel design, and industry trends. Items that will be addressed include inspection and drydock intervals, lifesaving, firefighting, machinery and electrical requirements, passenger capacity, freeing port clarifications, very large "T" boats and dynamically supported craft.

An example of the proposed changes the Coast Guard is considering in the area of lifesaving equipment, are draft proposed regulations that would require liferafts or inflatable buoyant apparatus for 100% of the persons on board small passenger vessels. Current regulations require life floats and buoyant apparatus which provide buoyancy for survivors, but unlike lifeboats and liferafts, they do not keep survivors out of the water. The requirement under consideration would apply to all vessels in ocean service, and in most other services at times of the year when the prevailing water temperature is 15°/C (59°/F) or lower.

The Coast Guard has recently initiated a regulatory project to revise the regulations concerning manning and qualifications of personnel employed on small passenger vessels. These revisions are intended to enhance the safe operation of these vessels.

For large passenger vessels, we are working on a regulation project to incorporate the 1983 Safety of Life at Sea Convention (SOLAS) Amendments into the Code of Federal Regulations. As part of that project we will propose other revisions to the lifesaving regulations for large passenger vessels in all services, including those not subject to SOLAS. The proposals will be very similar to those described previously for small passenger vessels, except that the lifesaving equipment for some large passenger vessels will include some lifeboats, as well as inflatable liferafts.

As part of the project for large passenger vessels, the Coast Guard will propose new muster and emergency instruction regulations. Musters of the passengers would be required within 24 hours after their embarkation for voyages of more than one day's duration. For shorter voyages, or if only a small number of passengers embark after the muster has been held, these passengers would have to be made aware of the emergency instructions.

The Coast Guard will also propose new onboard training and drill regulations for large passenger vessels. In addition to weekly abandon-ship drills to keep crews proficient in the operation of the equipment, on-board training sessions would be required that would cover the use of all survival equipment during a two-month training cycle.

Each year, the Coast Guard conducts a review of approximately eighty Coast Guard approved mariner training programs. The Coast Guard reviews the course content, instructors' qualifications, and adequacy of the facilities. By allowing the substitution of training for a portion of the sea service required to qualify for a license or merchant mariners document, the Coast Guard encourages continued training.

The rulemaking entitled Licensing of Maritime Personnel will increase the training and experience requirements for obtaining a license. As an example, every individual seeking a deck license for vessels over two hundred gross tons will be required to complete firefighting and radar training in addition to the required examinations. The rulemaking also broadens the range of subjects a license applicant will be examined in. This rulemaking is expected to become effective in October 1987.

The Coast Guard has developed an improved system for creating new licensing examinations. Rapid revision of these examinations will allow mariners to spend more time studying the subject matter, and discourage the current examination preparation practice of reviewing previously used examinations.

The Coast Guard is also revising its regulatory requirements for shipboard drills. Presently, weekly fire and boat drills are usually held together, with limited training actually accomplished. The revised regulations would require that these drills be conducted separately. The revised regulations would also provide detailed requirements as to what must be accomplished during the drills and what training materials must be on board each vessel.

The Navigation Safety Regulations (33 CFR 164) which came into effect in June 1977 provided a minimum standard for navigation equipment and procedures for all vessels of 1600 or more gross tons navigating in U.S. waters. Although the regulations apply to all vessel types , and were not a specific initiative directed to U.S. passenger vessels, passenger vessels are subject to the requirements to the extent that they were not previously required to be equipped. Among other things, the regulations require radar, magnetic and gyro compasses, depth sounder, rudder angle indicator, RPM indicator and display of maneuvering information.

Since the original rulemaking, the regulations were amended to include a requirement for an electronic position device. In October, 1984, the requirement for an automatic radar plotting aid was extended to include vessels in addition to tankers of 10,000 or more gross tons. The Coast Guard published Inland Navigation Rules which became effective on December 24, 1981 (in March, 1983 on the Great Lakes). These rules include a provision not found in International Collision Regulations which allows vessels to use bridge-to-bridge telephone instead of whistle signals to reach passing agreements with other vessels to avoid the risk of collision.

SENATOR LAUTENBERG: What action has the Coast Guard taken to enhance the safety of U.S. passengers on foreign flag passenger ships by improving inspection procedures, and by working through the International Maritime Organization to require added safeguards to shipboard firefighting systems?

ANSWER:The Coast Guard has continued to enforce 46 U.S.C. 3505 which provides that a foreign vessel of more than 100 gross tons having berth or stateroom accommodations for at least 50 passengers may not depart from a United States port with passengers who are embarked at that port, unless the Coast Guard is satisfied that the vessel complies with the standards stated in the International Convention for the Safety of Life at Sea to which the United States government is currently a party. The Coast Guard reviews plans submitted by foreign passenger vessel owners for vessels which are to operate for the first time from a U.S. port and has disseminated guidance to facilitate this process and minimize delays while effectively verifying that vessels meet minimum fire safety standards.

The Coast Guard has managed and conducted a foreign passenger vessel examination program since 1968. In 1984, the Coast Guard reevaluated its foreign passenger vessel examination program. Accordingly, in 1985 the Coast Guard reviewed, revised, and reissued its already extensive guidance for field inspectors. The Coast Guard conducts an Initial Port Call examination when a foreign passenger vessel makes its initial port call at a U.S. port, or has been out of service for an extended period of time and desires to return to U.S. service. These vessels must be examined at least annually thereafter, and quarterly rexaminations are also conducted. These examinations cover, in varying degrees, structural fire protection, fire detection and extinction equipment, fire and abandon ship drills, lifesaving equipment, and such other examination as is required to insure the vessel complies with SOLAS. This process is known as Control Verification. A similar examination is conducted on cargo vessels of countries party to SOLAS that embark and carry up to twelve passengers from a port of the U.S..

A review of data retrieved from the Coast Guard's Marine Safety Information System shows, for example, that in 1986 the Coast Guard expended nearly 3200 man hours on 147 SOLAS Control Verifications on foreign passenger vessels.

The Coast Guard is active on the Maritime Safety Committee (MSC) of the International Maritime Organization (IMO) and has recently caused that Committee to instruct its Technical Sub-Committees to take certain action to encourage higher levels of safety an all passenger vessels on international voyages, many of which depart from ports of the United States in the tourist trade. These include:

a. Adding to their work program the consideration of requirements to maintain the integrity of vehicle spaces (e.g. on passenger ferries) including operational procedures;

b. Re-emphasizing the basic requirement to achieve watertight integrity of the hull and weathertight integrity topside, any time a vessel is underway;

c. Re-emphasizing the need for internal watertight integrity to be maintained when a vessel is underway;

d. Re-examine the SOLAS 74/78 damage stability requirements for the vertical extent of damage and to complete its work on residual stability after damage, for passenger vessels;

e. Examine and clarify how current passenger vessel stability requirements are to be applied regarding off-center flooding as envisioned for damaged stability;

f. To develop requirements for intact stability on an urgent basis.

At the IMO Subcommittee on Fire Protection, the United States made a series of initiatives all aimed at passenger ship safety. Specific topics addressed were:

Automatic Fire Door Release
Automatic Ventilation Damper Controls
Automatic Fire Detection Controls/Integrated Systems
Hose Ports in Fire Doors
Sprinkler Systems
Unlined Linen Hose
Onboard Training and Drills
Operation of Fire Doors

The Coast Guard was also represented at the International Conference on Training and Certification of Seafarers which was convened by the IMO in 1978. The Conference adopted the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978, which includes requirements for attendance at approved fire-fighting courses for certain licensed individuals. This Convention entered into force internationally on April 28, 1984. Although the United States has not ratified the Convention,the Coast Guard supports the Convention including special training in fire-fighting. Additionally, Resolution A.437 (XI), adopted by IMO on November 15, 1979 and supported by the Coast Guard, recommends that Member Governments aim at training all of their seafarers in fire prevention and fire-fighting.

ALCOHOL AND DRUG RULES

SENATOR LAUTENBERG: What is the status of the Coast Guard's two important rulemaking initiatives addressing alcohol and drug use in the various marine modes?

ANSWER: On May 23, 1986, the Coast Guard published two separate rulemakings related to alcohol and drug use aboard vessels. These rulemakings were as follow: 1) an Advance Notice of Proposed Rulemaking (ANPRM), entitled Operation of a Vessel While Intoxicated [CGD 84-099a], which addressed recreational vessel operations; and, 2) a Notice of Proposed Rulemaking (NPRM), entitled Operating a Vessel While Intoxicated [CGD 84-099], which primarily addressed commercial vessel operations.

On February 9, 1987, following review and revision in response to public comments, the ANPRM was republished as an NPRM. These proposed rules also included minor changes to the original NPRM concerning commercial vessels and therefore constituted a Supplemental Notice of Proposed Rulemaking (SNPRM). Following publication on February 9th, both the new NPRM concerning recreational vessels and the supplemental changes to the original NPRM concerning commercial vessels were subject to public comment for a 90 day period.

The comment period for both rulemaking projects, closed on May 11, 1987. Revisions are being made to both rulemakings in response to the comments received and final rules are scheduled for publication later in the summer of 1987.

SENATOR LAUTENBERG: I believe the Coast Guard Authorization Act of 1984 (P.L. 98-557) required the Coast Guard to establish appropriate standards for determining whether an individual is intoxicated while operating a vessel. In response to this May 23, 1986, the Coast Guard published an Advance Notice of Proposed Rulemaking on alcohol use in recreational boating. What is the status of this rulemaking initiative?

ANSWER: The Coast Guard published a Notice of Proposed Rulemaking in the Federal Register on February 9, 1987. The comment period closed May 11, 1987.

SENATOR LAUTENBERG: And, Why has the Coast Guard failed to issue a final rule (or even publish a proposed rule) in the more than two years that have passed since Congress directed that such a rule be implemented?

ANSWER: This rulemaking initiative has been a complex process involving initial research into existing data, studies, Federal regulations and State law, standards and enforcement. Concern raised over Federal and State enforcement roles regarding recreational boaters led to the Coast Guard's publishing a Notice of Proposed Rulemaking (NPRM) for commercial vessels and asking questions related to recreational boaters in an Advance Notice of Proposed Rulemaking in May 1986. The rules proposed in the February 1987 NPRM reflect consideration of the public comment responding to the Advance Notice. The Coast Guard believes it has proposed workable and effective standards for determining whether an individual is intoxicated. The NPRM proposes that a uniform behavioral standard and a Federal blood alcohol concentration (BAC) will apply when a State has no BAC standard enacted or the State standard is not enforceable. By so doing, the Federal government standards will not conflict with enacted State BAC standards

SENATOR LAUTENBERG: When does the Coast Guard expect that a final rule will be published and take effect?

ANSWER: The Coast Guard expects to issue a final rule affecting both commercial and recreational vessels during July 1987, with an effective date 30 days after publication in the Federal Register.

OPERATING EXPENSES

SENATOR LAUTENBERG: You are requesting that $30,000,000 of your appropriation be derived from the boat safety account. What is the reason for this, and what is the status of the authorizing legislation required to accomplish it?

ANSWER: Currently, we are spending over $200 million per year on safety for recreational boaters. The $30 million request from the aquatic resources trust fund will help to offset a portion of these costs. Proposed legislation to reallocate the distribution of the boat safety account was transmitted to the President of the Senate and the Speaker of the House of Representatives on April 7, 1987.

SENATOR LAUTENBERG: You are also proposing to delete the specific set aside for drug enforcement activities. What is the reason for this proposed change?

ANSWER: We do not believe we really need this specific set aside for drug enforcement activities. Coast Guard, under law, maintains a strong commitment to the enforcement of laws and treaties and thereby to drug law enforcement in particular. Because of the multimission character of the Coast Guard, mandating that specific amounts of money be spent from Operating Expenses for a given program restricts the flexibility needed to respond to any and all contingencies that may occur in the agency's programs.

SENATOR LAUTENBERG: Last year it was indicated that in fiscal year 1985, 3 percent of your search and rescue cases were referred to commercial operators. What was the percentage in fiscal year 1986, and what are you projecting for 1987?

ANSWER: The search and rescue program database shows that five percent of all Coast Guard cases were referred to commercial firms during FY 86. We do not forecast a significant increase in the amount of cases handled by private concerns in 1987.

SENATOR LAUTENBERG: Although you are projecting slight increases over 1986 in your marine environmental protection and port safety workload, your workload data in these areas are considerably below the actual 1985 data shown in last year's justification (pg 30). Harbor patrols were 57,378 hours in 1985 and are estimated at 40,400 hours in 1988. However, your budget requests in these areas have contiuned to increase and your 1988 estimate of $146.8 million represents more than a 20 percent increase over your actual 1985 spending reflected in last year's justification.

Would you explain the reason for this --- why are the dollars going up and the workload declining?

ANSWER: In the port security environment harbor patrols, vessel boarding and cargo transfer monitoring decreased significantly due to Gramm Rudman cuts imposed on the Coast Guard in FY 1986. Anticipated program efficiencies should maintain at least this reduced level of harbor patrols in FY 1987 and FY 1988. Personnel were reallocated from port security patrols to meet increasing demands of Marine Pollution (MARPOL) enforcement, contingency planning, and mobilization/readiness tasking reflected in the FY 1988 budget submission (p.15).

Additional resources are still required for increased Port Security responsibilities to develop mission performance standards for vessel boardings, cargo transfer monitoring and waterfront facility inspections.

In the marine environmental protection area, performance definitions were changed in FY 1986 to more accurately reflect program activity. It is these new categories which are reflected in the FY 1988 budget.

FY 1985 and FY 1986 data is not strictly comparable to these new categories. Considering the entire program's workload, it has actually remained constant.

OPERATING EXPENSES

SENATOR LAUTENBERG: To what extent are your fisheries and law enforcement cutter operating hours and aircraft flight hours for the first five months of fiscal year 1987 consistent with last year's estimates?

ANSWER: Units report actual operating hours by quarter. The first quarter figures for fiscal year 1987 are available; the second quarter figures are not. Consequently, we will present the operating hours actually achieved during the first three months of fiscal year 1987 for comparison.

The Coast Guard estimated 45,000 cutter operating hours and 5,500 aircraft flight hours for fisheries enforcement in fiscal year 1987. The quarterly average of the fiscal year 1987 fisheries enforcement estimates are 11,250 cutter operating hours and 1375 aircraft flight hours. Actual Coast Guard fisheries law enforcement operating hours for the first quarter of fiscal year 1987 were 12,868 cutter operating hours and 2004 aircraft flight hours. As you can see both the cutter operating hours and the aircraft flight hours are exceeding fiscal year 1987 estimates by 14% and 46% respectively.

For general law enforcement, the Coast Guard estimated 210,000 cutter operating hours and 27,000 aircraft flight hours for fiscal year 1987. The quarterly average for general law enforcement in fiscal 1987 are 52,500 cutter operating hours and 6750 aircraft flight hours. Actual first quarter general law enforcement totals equal 58,419 cutter operating hours and 7117 aircraft flight hours. As with fisheries enforcement, the general law enforcement mission cutter operating hours and aircraft flight hours are exceeding fiscal year 1987 estimates (11% and 5% respectively).

SENATOR LAUTENBERG: Does this represent increased utilization of your existing cutters and aircraft?

ANSWER: Yes.

SENATOR LAUTENBERG: If so, how are you going to accomplish this?

ANSWER: Through improved reliability and upgrading of these resources through Fleet Rehabilitation and Modernization (FRAM) and Mid-life Maintenance Availability (MMA) programs as well as the retiring of older aircraft and vessels with new, modern replacements.

SENATOR LAUTENBERG: Would you provide for the record the projected availability for your cutters for fiscal years 1986, 1987 and 1988?

ANSWER:

	CUTTER AVAILABILITY (Percent Availability)		
	FY86	FY87	FY88
CUTTERS:			
WHEC 378	48	52	56
WHEC 327,311	47	43	43
WMEC 270	46	43	50
WMEC 210	43	50	47
WMEC 230,213,205,180	32	43	42
WSES 110	38	45	50
WPB 110	46	55	65
WPB 95	61	58	57
WPB 82	62	66	66

WHEC - High Endurance Cutter
WMEC - Medium Endurance Cutter
WSES - Surface Effect Ship
WPB - Patrol Boat

NOTES:

1. Cutter availability is the percentage of the year a cutter is not in a maintenance status. It includes underway and inport operational days, away from homeport training days, and, in the case of WPB 95 and 82, high readiness days.
2. Cutter availability for WPB 95s will decline due to increasing age of the resources.
3. WHEC 378 and WMEC 210 are based on non-augmented 185-day away from homeport standard.
4. WHEC 327,311 reflects expected decommissionings.
5. WMEC 270 reflects delivery of new cutters with post-delivery maintenance.
6. FY86 is actual and FY87 and FY88 are projected.

SENATOR LAUTENBERG: Do you have any estimates of what these additional operating and flight hours will accomplish in terms of increased vessel boardings or drug seizures?

ANSWER: With units operating at higher resource hours, more hours are provided in drug trafficking areas. We expect that a greater presence in any area will either provide a higher interdiction rate or greater deterrence to smugglers. With a greater deterrence, no increase in seizure statistics will be realized.

SENATOR LAUTENBERG: Including reimbursables, your "Other Services" (pgs. 18/19) are estimated to increase by nearly $20 million over fiscal year 1987. This appears to be more than the 3.5 percent standard inflation rate (p. 33). What is the reason for this increase.

ANSWER: The items included in "Other Services" are determined on a year by year basis. Consequently, the application of a 3.5 percent standard inflation rate is inappropriate. The same is true of "Travel and Transportation of Persons" and "Things", both of which show a decrease in FY 1988. Examples of charges in this category "Other Services" include: supplies and materials furnished by a contractor in connection with provided services; contractor performed repairs and alterations to buildings, vessels, equipment and the like; contracted services involving storage and care of vehicles and household goods, including those associated with permanent change of station transfers by military personnel; and subsistence and support of persons providing various contractual services.

SENATOR LAUTENBERG: Would you provide for the record a breakdown of the fiscal year 1987 and 1988 estimated obligations for "other services," including reimbursables.

ANSWER: The following tables provides a breakdown of the fiscal year 1987 and 1988 estimated obligations for other services (Dollar estimates in thousands).

25.0 Other services	FY 1987 estimate	FY 1988 estimate
Overhaul of vessels	$ 48,048	$ 50,824
Overhaul of aircraft	67,341	71,232
Repairs/maintenance (shore facilities)	62,252	65,847
Repairs/maintenance (electronic equipment)	19,436	20,558
Repairs/maintenance (aids to navigation)	4,533	4,795
Routine recreation services	318	336
Repairs/maintenance (training aids)	8,060	8,526
ADP services	18,383	19,444
Engineering design	14,905	15,766
Other services	95,501	101,018
Total	$338,777	$358,346

SENATOR LAUTENBERG: You also propose an increase of $28 million in fiscal year 1988 for "supplies and materials". Including reimbursables, these costs are approximately 16 percent over the fiscal year 1986 level. With the significant reductions in fuel prices over the past two years, why are your "supplies and materials" increasing at this rate?

ANSWER: Supplies and materials were reduced to fund the FY 1986 pay increase for military personnel. Funding for the pay raise is provided in FY 1987 and restores funding for supplies and materials. Supplies and materials related to defense readiness activities are funded by reimbursements in FY 1986 but are funded by direct appropriation in FY 87 and FY 88. Supplies and materials budget function is always subject to budget availability.

SENATOR LAUTENBERG: According to the information of page 175 of your justification, it appears that your new short range helicopters HH-65A cost about 30 percent more per hour to operate than the helicopters they replace (HH-52A). Why are they so much more expensive to operate?

ANSWER: The HH-65A helicopter is a more complex and capable helicopter than its predecessor the single engine, 1950s vintage HH-52A. The addition of these new, faster, twin engine, radar equipped helicopters to our fleet will significantly enhance our ability to provide services to the public. However, this enhancement comes at increased operation and maintenance costs. This increase is attributable to more expensive replacement parts and a higher hourly fuel consumption rate.

SENATOR LAUTENBERG: Do you expect a similar increase in operating costs for your medium range helicopters?

ANSWER: Initial indications are that costs for operating the Medium Range Recovery (MRR) replacement helicopter will be similar to the current MRR helicopter.

SENATOR LAUTENBERG: Last year it was indicated that your total energy costs were $108 million in Fiscal Year 1985. What were your actual costs for Fiscal Year 1986, and what are your estimates for Fiscal Years 1987 and 1988?

Answer: The Coast Guard's total energy costs for Fiscal Year 1986 were $95.3 million. This includes all vessel, aircraft and small boat fuel, electricity, heating and other miscellaneous energy costs.

The Fiscal Year 1987 Congressional reductions of almost $33 million for energy costs reduced our energy base from the cited $108 million to approximately $75 million.

Total energy costs for Fiscal Year 1987 are expected to be approximately $94 million. This estimate is based on current energy prices, current resource operating standards and historical energy usage rates. It is also adjusted to reflect actual energy cost data for the first half of Fiscal Year 1987 which were lower than expected due to an unusually mild winter.

Total energy costs for Fiscal Year 1988 are estimated to be approximately $102 million. This estimate allows for the resumption of energy price inflation in 1987. It also accounts for new resources expected to come on line and old resources expected to be decomissioned in accordance with the President's Fiscal Year 1988 Budget Request.

OPERATING EXPENSES

SENATOR LAUTENBERG: Your annualization increases includes $7.576 million for two aerostats. What is the annual operating cost for an aerostat?

ANSWER: The estimated annual operating cost per aerostat system is:

Support of Coast Guard Electronics	$ 120,000
Mobile Aerostat Platform Detachment (MAPDET) operating expenses	25,000
Lease of Mobile Aerostat Platform (MAP) vessel, civilian crew, and subsistence	2,800,000
Mobile Aerostat Detachment (MAPDET) military personnel costs	458,000
Fuel and port services	350,000
System maintenance	747,000
Total	$4,500,000

SENATOR LAUTENBERG: You are requesting a $9.2 million increase for GSA rent. However, on page 18 you show your rental payments to GSA increasing by less than $4 million. Would you explain the reason for these differences?

ANSWER: The last year that the Coast Guard received additional funding by Congress for increased rental payments to GSA was FY 1984. In FY 1985, 86, and 87, the Coast Guard was not funded for the increased costs of space rentals. The "rent" base is significantly underfunded. The $9.2 million requested is to fund the increases to the base that have occurred, plus the GSA projected increase for FY 1988 over the FY 1987 level.

SENATOR LAUTENBERG: How much are you paying on the average per square foot to GSA and how does this compare with your non-GSA rental costs?

ANSWER: For fiscal year 1987, the average cost of GSA office space is $13.72 per square foot, compared to an average cost of $10.51 per square foot for non-GSA office space.

SENATOR LAUTENBERG: You are requesting an increase of $749,000 for your ninth icebreaking tugboat that you state will be used primarily for domestic icebreaking. However, on page 16 you are not projecting any increased workload or operating hours for domestic icebreaking in fiscal year 1988. Why do you need an additional $749,000 if you don't plan to increase your domestic icebreaking?

ANSWER: The commissioning of USCGC STURGEON BAY, the ninth 140-foot icebreaker, will be offset by the decommissioning of USCGC RARITAN in FY 1988. This action will complete the replacement of World War II-era 110-foot tugs. Rather than increasing domestic icebreaking resources, the replacement program will provide significant economies because four of the new, more capable icebreakers with smaller crews will have replaced eight of the older cutters in the Northeastern U. S. However, since many of the savings were realized by decommissionings in earlier budgets, operating funds must now be provided for USCGC STURGON BAY.

SENATOR LAUTENBERG: On pages 42 and 43 have the delivery dates for the three cutters listed (Thetis, Forward, and Legare) slipped at all? If so, how long and why?

ANSWER: The delivery dates for the THETIS, FORWARD, and LEGARE have slipped three months from the dates shown on pages 42 and 43. The new schedule is:

Cutter	Revised Delivery Date
THETIS	May 1988
FORWARD	September 1988
LEGARE	January 1989

Major portions of the slippage were due to delays resulting from elements beyond the control of the contractor and government coupled with necessary and calculated Coast Guard directed changes. The amount of slippage attributable to the contractor can not be commented on at this time because the delays to which the contractor is ultimately entitled have not yet been adjudicated.

OPERATING EXPENSES

SENATOR LAUTENBERG: Why do you need 14 additional training positions for every cutter?

ANSWER: The BEAR Class cutters are minimally crewed. By definition, a minimally crewed cutter will only have sufficient personnel assigned for watchstanding. Crewing is insufficient to meet all organizational level preventive maintenance requirements or to allow absence for leave, school, etc. during underway periods. As a result, new crewmembers reporting aboard these particular cutters must be fully trained in the operation and maintenance of shipboard equipment so they can immediately assume watchstanding duties. The 14 additional positions are the number of people, based on the training requirements and school length, who must be trained each year prior to reporting. This number was developed based on an the total cutter training requirements and average crew rotation of a third of the crew each year.

SENATOR LAUTENBERG: Is it not possible to train the personnel for your three cutters with the personnel who trained the crews of the BEAR, TAMPA, and HARRIET LANE, all of which have been in operation for over one year?

ANSWER: No, each of these cutters requires its own training allowance. As noted in the answer to your previous question, the 14 additional training positions are the number of people, based on the rotation of a third of the crew each year, who must be trained prior to reporting to each BEAR class cutter. BEAR, TAMPA, and HARRIET LANE will continue to need their training billets in order to allow their new crewmembers to be trained prior to reporting.

SENATOR LAUTENBERG: You indicate that you will need 19 additional crew personnel for your 378-foot cutters after the Fleet Rehabilitation and Modernization (FRAM) is completed. Would you explain what these 19 additional personnel will be doing and tell us why some of these tasks cannot be assigned to some of the 158 personnel currently assigned to vessels?

ANSWER: The number currently assigned to these vessels varies between 154 and 157. The additional 19 people are needed to enable these ships to completely man all stations while at Condition I (combat situation) or Condition III (wartime steaming). They are needed to operate and maintain new and more complex systems that are installed during FRAM, such as the AN-SPS 40 Air Search Radar, AN-SQR 17A LAMPs Processor, Super Rapid Blooming Off-Board Chaff (SRBOC), MK 75/76 mm gun, MK 92 Gunfire Control System, and NAVMACS A+ communications suite, as well as the post-FRAM installation of a HARPOON missile system and PHALANX Close-in Weapons System (CIWS). These personnel also correct some long standing and documented personnel shortcomings in the Radarman rating.

SENATOR LAUTENBERG: How many rescue swimmers do you currently have and how many additional swimmers do you intend to add after fiscal year 1988?

ANSWER: The Rescue Swimmer Program has received 27 new billets to date, and we plan to add 31 more during fiscal year 1988. To complete the Rescue Swimmer Program's implementation, an additional 73 billets will be required, for a total of 131.

SENATOR LAUTENBERG: You indicate that you intend to eventually have six recompression chambers. Where do you intend to locate these chambers?

ANSWER: Two of the chambers will be staged in Seattle, Washington for use aboard the two polar icebreakers homeported there. Two will be located in Hawaii for use aboard buoy tenders when they deploy beyond helicopter range of Hawaii. One will go to Mobile, Alabama and one to Wilmington, North Carolina for the icebreakers WESTWIND and NORTHWIND, respectively.

SENATOR LAUTENBERG: You refer to your port security anti-terrorism effort as a new initiative. Haven't you always trained your port security personnel in anti-terrorism?

ANSWER: Until 1984, the Coast Guard did not focus its planning or personnel training on anti-terrorism activities.

SENATOR LAUTENBERG: If not, why not; and if so, why do you need more people to do what you already are doing?

ANSWER: During prior years there existed no major threat and no legislation to justify the training of Coast Guard personnel in anti-terrorism activities. Personnel who were previously engaged in port security duties during post World War II era were shifted to environmental response and port safety duties in response to legislative mandates, maritime disasters, and most recently drug interdiction duties. In order not to degrade our efforts in environmental protection and port safety, additional personnel are now required to train in anti-terrorism as a result of the increased worldwide threat of maritime terrorism and the new legislated responsibility to prevent and respond to maritime terrorism. These reasons are being pursued through the normal budget process.

SENATOR LAUTENBERG: Would you provide a breakdown for the record indicating how much of your $3,328,000 request is for underground storage tank leak detection devices, tank replacement projects, and personnel costs?

ANSWER: The breakdown is as follows:

Leak detection devices	$ 868,000
Tank replacement	2,000,000
Personnel	460,000
TOTAL	$3,328,000

OPERATING EXPENSES

SENATOR LAUTENBERG: Would you provide for the record a listing of your cutters showing the age and planned replacement dates for each?

ANSWER: The cutter age and replacement schedule is as follows:

	YEARS IN SERVICE	REPLACEMENT YEAR
WHEC-715 : HAMILTON CLASS		
715 HAMILTON	20	1998
716 DALLAS	20	1999
717 MELLON	20	1998
718 CHASE	19	2000
719 BOUTWELL	19	2000
720 SHERMAN	19	1998
721 GALLATIN	19	2000
722 MORGANTHAU	18	2000
723 RUSH	18	1999
724 MUNRO	16	1999
725 JARVIS	16	2001
726 MIDGETT	15	2001
WMEC-901 : BEAR CLASS		
901 BEAR	03	2014
902 TAMPA	02	2015
903 HARRIET LANE	01	2016
904 NORTHLAND	01	2016
905 SPENCER	01	2016
327' WHEC:		
35 INGHAM	51	1988
311' WHEC:		
379 UNIMAK	45	1988

WHEC: High Endurance Cutter
WMEC: Medium Endurance Cutter

	YEARS IN SERVICE	REPLACEMENT YEAR
WMEC-615 : RELIANCE CLASS		
615 RELIANCE	23	1998
616 DILIGENCE	23	2000
617 VIGILANT	23	2001
618 ACTIVE	21	1997
619 CONFIDENCE	21	1998
620 RESOLUTE	21	2001
621 VALIANT	20	1999
622 COURAGEOUS	19	1998
623 STEADFAST	19	1999
624 DAUNTLESS	19	2000
625 VENTUROUS	19	2000
626 DEPENDABLE	19	1998

	YEARS IN SERVICE	REPLACEMENT YEAR
627 VIGOROUS	18	2001
628 DURABLE	20	1998
629 DECISIVE	19	1999
630 ALERT	18	2000
213' WMEC:		
6 ESCAPE	44	NA*
167 ACUSHNET	44	TBD#
168 YOCONA	43	1990
205' WMEC		
76 UTE	45	NA*
85 LIPAN	45	NA*
153 CHILULA	42	1989
165 CHEROKEE	48	1988
166 TAMAROA	44	1988
230' WMEC		
38 STORIS	45	TBD#
180' WMEC		
292 CLOVER	45	1989
295 EVERGREEN	44	1989
300 CITRUS	44	1989

* Not applicable. These vessels presently scheduled for return to the US NAVY in 1990.

# To be determined.

WMEC: Medium Endurance Cutter

WPB-1301 : ISLAND CLASS		
1301 FARALLON	02	2000
1302 MANITOU	02	2000
1303 MATAGORDA	02	2000
1304 MAUI	02	2000
1305 MONHEGAN	01	2001
1306 NUNIVAK	01	2001
1307 OCRACOKE	01	2001
1308 VASHON	01	2001
1309 AQUIDNECK	01	2001
1310 MUSTANG	01	2001
1311 NAUSHON	01	2001
1312 SANIBEL	01	2001
1313 EDISTO	01	2001
1314 SAPELO	01	2001
1315 MATINICUS	00	2002
1316 NANTUCKET	00	2002
WSES-2 : SEA BIRD CLASS		
2 SEA HAWK	05	1988
3 SHEARWATER	05	1988
4 PETREL	05	1988

WPB-95004 : CAPE CLASS	YEARS IN SERVICE	REPLACEMENT YEAR
95302 CAPE HIGGON	33	1991
95303 CAPE UPRIGHT	33	1987
95304 CAPE GULL	33	1988
95305 CAPE HATTERAS	33	1990
95306 CAPE GEORGE	33	1991
95307 CAPE CURRENT	33	1988
95309 CAPE CARTER	33	1993
95312 CAPE KNOX	31	1989
95313 CAPE MORGAN	31	1990
95316 CAPE FOX	31	1990
95319 CAPE ROMAIN	31	1988
95321 CAPE CROSS	28	1992
95322 CAPE HORN	28	1993
95324 CAPE SHOALWATER	28	1989
95326 CAPE CORWIN	28	1992
95328 CAPE HENLOPEN	28	1992
95332 CAPE YORK	26	1991

WPB: Patrol Boat
WSES: Surface Effect Ship

WPB-82301: POINT CLASS		
82302 POINT HOPE	26	1991
82311 POINT VERDE	25	1991
82312 POINT SWIFT	25	1991
82314 POINT THATCHER	25	1991
82318 POINT HERRON	25	1991
82332 POINT ROBERTS	24	1991
82333 POINT HIGHLAND	24	1991
82334 POINT LEDGE	24	1991
82335 POINT COUNTESS	24	1991
82336 POINT GLASS	24	1991
82337 POINT DIVIDE	24	1991
82338 POINT BRIDGE	24	1991
82339 POINT CHICO	24	1991
82340 POINT BATAN	24	1991
82341 POINT LOOKOUT	24	1991
82342 POINT BAKER	23	1991
82343 POINT WELLS	23	1991
82344 POINT ESTERO	23	1991
82345 POINT JUDITH	20	1991
82346 POINT ARENA	20	1991
82347 POINT BONITA	20	1991
82348 POINT BARROW	20	1992
82349 POINT SPENCER	20	1992
82350 POINT FRANKLIN	20	1992
82351 POINT BENNETT	20	1992
82352 POINT SAL	20	1992
82353 POINT MONROE	20	1992
82354 POINT EVANS	19	1992
82355 POINT HANNON	19	1992
82356 POINT FRANCIS	19	1992
82357 POINT HURON	19	1992
82358 POINT STUART	19	1992
82359 POINT STEELE	19	1993

	YEARS IN SERVICE	REPLACEMENT YEAR
82360 POINT WINSLOW	19	1993
82361 POINT CHARLES	19	1993
82362 POINT BROWN	19	1993
82363 POINT NOWELL	19	1993
82364 POINT WHITEHORN	19	1993
82365 POINT TURNER	19	1993
82366 POINT LOBOS	19	1994
82367 POINT KNOLL	19	1994
82368 POINT WARDE	19	1994
82369 POINT HEYER	19	1994
82370 POINT RICHMOND	19	1994
82371 POINT BARNES	16	1995
82372 POINT BROWER	16	1995
82373 POINT CAMDEN	16	1995
82374 POINT CARREW	16	1995
82375 POINT DORAN	16	1995
82376 POINT HARRIS	16	1995
82377 POINT HOBART	16	1995
82378 POINT JACKSON	16	1995
82379 POINT MARTIN	16	1995

SENATOR LAUTENBERG: You are requesting an increase of $580,000 for flight instructors. How many Coast Guard flight instructors are assigned to Pensacola, Florida, and to what extent do you use Navy instructors on a reimbursable basis?

ANSWER: We have 23 Coast Guard flight instructors assigned to the Flight Training center at Naval Air Station Pensacola. Under the arrangement we have with the Navy to obtain trained naval aviators, we must provide flight instructors commensurate with the graduate output we require (approximately 1 instructor for every 1.75 - 2.0 graduates). The Navy does not have the disposable resources in the form of extra flight instructors to accommodate our needs on solely a fund reimbursement basis.

ACQUISITION, CONSTRUCTION AND IMPROVEMENTS

SENATOR LAUTENBERG: Last year we received testimony that the regulation implementing the AC&I warranty language that has been contained in each appropriations act since fiscal year 1985 had yet to be finished. What is the status of this regulation? Please provide for the record a copy of this regulation.

ANSWER: The regulation has been drafted and is being routed to OMB for review. The regulation will be provided after final review/approval is granted. Warranty language has been incorporated in several recent acquisitions.

SENATOR LAUTENBERG: What acquisitions have warranties been written for, and have you had any instances yet where such warranties have been invoked?

ANSWER: Three contracts include warranty provisions, namely, two Fleet Renovation and Modernization (FRAM) contracts (East and West) and the 110′ Island Class Patrol Boat (WPB) contract. Repairs to the 110′ Island Class WPBs have been made under warranty at no cost to the government.

SENATOR LAUTENBERG: You are requesting $277.893 million for Acquisition, construction and improvement projects for fiscal year 1988. Is this spending level sufficient to adequately maintain a captial base that will support your current level of service?

ANSWER: The FY 1988 AC&I level together with the FY 1987 Coastal Defense Augmentation Account is considered sufficient to maintain the Coast Guard's capital plant. However, without continued augmentation, and with AC&I levels held to FY 1988 levels over several years, we will be unable to maintain the status quo of our capital plant or sustain large on-going multi-year acquisition programs such as the Medium Range Recovery helicopter acquisition, the 378-ft WHEC Fleet Renovation and Modification (FRAM) program, the WPB Replacement Program, etc. Past analysis has shown that annual capital funding in the range of $450 - 600 million (depending upon the ebb and flow of capital asset life cycles) is needed to support or capital plant valued at close to $15 billion. Further, improvements to aircraft fleets including C-130 fixed wing aircraft additions and replacements and HU-25A and C-130 sensor acquisitions add measureably to military logistics and surveillance responsibilities. Our helicopter replacement program for the Medium Range Recovery helicopter is a joint CG-Navy procurement under an existing Navy contract; it is compatible with DOD combat search and rescue helicopter missions. In the area of communications, DOD appropriations have provided funds for secure communications and vessel navigation and communication improvements. In addition, the acquisition of Aerostat surveillance systems provide for drug enforcement and possibly other national security surveillance requirements.

SENATOR LAUTENBERG: Please provide for the record a detailed summary of the procurement history of the FLAR, FLIR, HARPOON and Active-Gated Television systems showing the amounts appropriated and obligated by fiscal year, a description of the problems experienced, the current status, and a comparison of the originally proposed and current procurement milestone dates.

ANSWER: FLAR: The search radar originally identified for use in the FLAR system was an AN/APS-134. Six HC-130H aircraft were procured from Lockheed Aircraft corporation with provisions for the AN/APS-134 radar. In June 1985 a decision was made to switch to the AN/APS-137 radar which is a more capable radar. In addition, the Coast Guard is acquiring the AN/APS-137 through a Navy contract. Contract award was delayed in the Navy until December 1986. Award in December obligated the Coast Guard for the first lot of radars (16). Subsequent contract options provide for the purchase of up to twenty additional radars. These options have yet to be negotiated and exercised. A listing of the significant FLAR funding transactions is shown below.

FUNDING:

SOURCE	FY	AMOUNT
CG AC&I	82	13,100,000
CG AC&I	84	2,000,000
CG AC&I reprogrammed to COMDAC	84	(1,150,000)
CG/DOD Supplemental	84	6,100,000
Navy APN 7	86	12,842,398
CG/DOD Supplemental (CDAA*)	86	41,425,000

SOURCE	FY	AMOUNT
CG/DOD Supplemental (CDAA)	87	9,100,000
Navy APN 7	87	4,670,000
Total		$88,087,398

PROJECTED OBILGATIONS:

DESCRIPTION	FY	OBLIGATED
Coast Guard Funds:		
Bendix WX Radars	84	1,785,854
CG AC&I to Navy for APS-137's	87	4,950,725
Provisions for radar Installation	84	1,872,266
C-130 Config. Audit	87	199,991
Travel and Admin		112,000
Coast Guard Subtotal		$8,920,836
Navy Funds:		
CDAA for APS-137's		18,426,745
APN-7 for APS-137's		12,842,398
Navy Subtotal		$31,269,143
Total CG and Navy		$40,189,979

* Coastal Defense Augmentation Account (CDAA)

Exercise of the FY87 option will obligate an additional $32.5 Million by June 1987 and installation kit award will obligate $7.5 Million by September 1987. This will result in a carry-over of approximately $8 Million. The large carry-over is due to the earlier than anticipated availability of $9.1 Million in CDAA funds and the phasing of contractual options.

A listing of the current FLAR milestones is shown below along with original proposed dates where applicable.

Milestone	Original Date	Date Completed	Current Date
Contract for Provisions for APS-134	5/84	5/84	N/A
Decision to procure APS-137	N/A	6/85	N/A
Ltr. to Asst. Sec. of Navy	N/A	7/85	N/A
Change MIPR to APS-137	N/A	7/85	N/A
Contract for APS-137 provisions	8/85	9/85	N/A
Contract for CG peculiar data	8/85	9/85	N/A
Navy Statement of Work	9/85	9/85	N/A
Navy Contract w/2 years of options	2/85	12/86	N/A
Award Contract for configuration audit	12/86	1/87	N/A
Complete configuration audit	4/87		5/87
Exercise second option on Navy contract	10/86		6/87

CG Contract for Inst. Kits	1/87	9/87
First radar delivered	2/88	6/88
First installation completed	5/88	9/88
Final radar delivered	10/89	10/90
Final Installation complete	1/90	12/90

FLIR: The HH-65A Forward Looking Infrared Radar (FLIR) project has been canceled. Cancellation of the project was based upon the anticipated reduction in HH-65A cabin space and range caused by the proposed FLIR installation.

The HH-65A currently operates very close to its maximum gross weight at take-off. A FLIR installation meeting the Coast Guard's operational requirements would weigh approximately 150 lbs when all mounting brackets, cables, and system hardware are included. To remain within the gross weight limitation, aircraft endurance would be reduced by 15 minutes.

Cabin space also is at a premium on the HH-65A. Installation of an operator's console would reduce space for passengers, cargo, or rescue equipment.

HARPOON HOST: Our initial procurement strategy was abandoned since it did not comply with the requirements for competition in accordance with the new Federal Acquisition Regulations (FAR) which became effective in April 1985. A contract for the prototype kits may be signed in July/Aug 1987. A contract for full production is expected to be signed in October 1988.

FUNDING:

SOURCE	FY	AMOUNT
CG AC&I	84	$16,900,000
CG AC&I	84	($13,800,000)

PROJECTED OBLIGATIONS:

DESCRIPTION	FY	OBLIGATED
Host equipment & installation	87	$2,950,000
Ship Grid	88	$150,000

MILESTONE	ORIGINAL DATE	DATE COMPLETED	CURRENT DATE
Statement of Work (SOW) approval	5/85		5/87
Prenotification	6/85	2/87	N/A
RFP Issued	7/85		6/87
Prototype contract award	12/85		8/87

AGTV: The proof-of-concept Active Gated Television (AGTV) passed its functional flight tests in May 1985. However, evaluation in an operational environment was not completed until Fall 1986 due to significant problems encountered in contracting for prototype support during the period June 1985 to July 1986. During recent operations, the AGTV successfully demonstrated its capabilities and usefulness in support of Coast Guard missions. The AGTV is capable of displaying a video image of both airborne and surface targets with sufficient detail to read 6 inch high lettering on the darkest nights. This is extremely useful in identifying radar targets for law enforcement purposes. The production procurement has passed through an internal critical review process and is now proceeding. The procurement schedule has been revised to include first article testing prior to option exercise for the remaining production, and a change from a sole-source to a competitive procurement.

FUNDING SOURCES:

SOURCE:	FY	AMOUNT
DOD Supplemental appropriation	84	$7,200,000
R&D transfer for prototype maintenance	85	$90,000
TOTAL		$7,290,000
OBLIGATIONS:		
NADC technical support MIPR	84	$99,000
Prototype AGTV repairs	86	$75,842
		$174,842
BALANCE		$7,115,158
PROJECTED OBLIGATIONS:		
Prototype support	87	$250,000
Production AGTV first article	88	$4,800,000
Five production units	90	$11,800,000

MILESTONE	ORIGINAL DATE	CURRENT DATE
Complete Procurement Package	7/85	5/87
Receive TSARC AP Update approval	9/85	9/87
Issue RFP for production AGTV	4/86	11/87
Production AGTV contract award	9/88	9/86
First Article delivered for testing	4/88	3/90
Award production option	N/A	9/90
AGTV unit #1 delivered (after refurbishing)	6/88	11/90

AGTV No. 2 delivered	6/88	11/91
AGTV No. 3 delivered	8/88	11/91
AGTV No. 4 delivered	10/88	12/91
AGTV No. 5 delivered	12/88	12/91
AGTV No. 6 delivered	2/89	1/92
All spares delivered, contract complete	8/89	6/92

SENATOR LAUTENBERG: You are requesting a 9.2 percent increase in Acquisition, Construction, and Improvement (AC&I) staffing levels — from 521 positions to 569 positions. Would you explain the reason for this large staffing increase?

ANSWER: The AC&I staffing levels have remained constant since 1982 while the number and volume of AC&I projects has grown substantially. Since that time the procurement process has become steadily and increasingly complex, requiring a significant increase in the amount of project review, both internally and externally. Several multi-year programs such as the 378' High Endurance Cutter (WHEC) Fleet Renovation and Modernization (FRAM), 270' Medium Endurance Cutter (WMEC) Procurement, 110' Patrol Craft (WPB) Procurement and Short Range Recovery (SRR) Aircraft procurement, continue to drain limited AC&I resources. The institution of an Office of Major Acquisition in 1986 has also absorbed several existing AC&I positions. The transfer of significant portions of the Coastal Defense Augmentation Account as well as other DOD transfers and supplementals to the Coast Guard has created additional demands on existing resources. Beginning this year we have become more involved in executing projects for other agencies such as the construction of two offshore navigation structures for the NAVY at Kings Bay, GA in support of their Trident Submarines, and construction of mid-continent LORAN stations for the Federal Aviation Administration. While these projects are executed on a reimbursable basis, they still create demands on the existing support positions.

Cumulative project workload during FY 1988 will create a need for 41 new full time equivalent personnel resources. Demand is such that we are currently subsidizing AC&I requirements with OE resources in some cases. New and ongoing project activities supported by the requested staffing increase include the 378-foot Fleet Renovation and Modernization (FRAM), Motor Lifeboat (MLB) replacement, Medium Range Recovery (MRR) helicopter replacement, Forward Looking Airborne Radar (FLAR), and secure communications projects.

SENATOR LAUTENBERG: Please provide for the record a square footage comparison for your following Acquisition, Construction and Improvement (AC&I) requests: The Savannah, Ga air station hangar; the Alameda, CA clinic; the Petaluma, CA housing and dining facility; the Montauk, NY barracks/dining facility; and the Yankeetown, FL and St. Clair Shores, MI stations. Please also add a column showing the cost per square foot for each facility.

ANSWER:

SQUARE FOOTAGE (SF) COMPARISON BETWEEN THE PRESENT AND REPLACEMENT FACILITIES AND BUILDING UNIT COSTS

	PRESENT (1000 SF)	REPLACEMENT (1000 SF)	CHANGE (1000 SF)	BLDG COST ($/SF)
Savannah, GA Construct Hangar	11.7	30.9	+19.2	$ 98.2
Alameda, CA Clinic Replacement	35.5	16.5	-19.0	$ 141.1
Petaluma, CA Construct Unaccompanied Personnel Housing	NONE	84.0	+84.0	$ 103.8
Montauk, NY Construct Unaccompanied Personnel Housing and Dining	NONE	9.0	+9.0	$ 110.6
Yankeetown, FL Construct Station	NONE	10.4	+10.4	$ 87.2
St. Clair Shores, MI Rebuild Station	12.9	12.2	-0.7	$ 110.6
TOTAL	60.1	163.0	+102.9	

SENATOR LAUTENBERG: Please also provide for the record the 270-Foot Cutter Delivery schedule. Please explain the reason for any slippages in estimated delivery dates from those reported last year.

Answer:

270-FOOT CUTTER DELIVERY SCHEDULES

Cutter	Original contract delivery	Current contract delivery	Estimated commissioning	Estimated ready for operations	Homeport
Bear	Dec. 31, 1980	Jan. 25, 1983	Jan. 25, 1983*	Jan. 1985*	Portsmouth, VA
Tampa	Apr. 30, 1981	Dec. 05, 1983	Dec. 05, 1983*	Dec. 1985*	Portsmouth, VA
Harriet Lane	Aug. 28, 1981	May 09, 1984	May 09, 1984*	Mar. 1986*	Portsmouth, VA
Northland	Dec. 26, 1981	Jul. 15, 1984	Jul. 15, 1984*	Jun. 1986*	Portsmouth, VA
Spencer	Jun. 16, 1984	Jul. 27, 1984	Dec. 09, 1985*	Dec. 1986*	Boston, MA
Seneca	Oct. 14, 1984	Nov. 09, 1984	Jul. 15, 1986*	Jul. 1987	Boston, MA
Escanaba	Feb. 11, 1985	Feb. 13, 1985	Feb. 03, 1987*	Feb. 1988	Boston, MA
Tahoma	Jun. 11, 1985	Jun. 13, 1985	Aug. 1987	Aug. 1988	New Bedford, MA
Campbell	Oct. 09, 1985	Oct. 09, 1985	Jan. 1988	Jan. 1989	New Bedford, MA
Thetis	Feb. 06, 1986	Feb. 06, 1986	May 1988	May 1989	Long Beach, CA
Forward	Jun. 06, 1986	Jun. 06, 1986	Sep. 1988	Sep. 1989	Long Beach, CA
Legare	Oct. 04, 1986	Oct. 04, 1986	Jan. 1989	Jan. 1990	Long Beach, CA
Mohawk	Feb. 01, 1987	Feb. 01, 1987	May 1989	May 1990	Long Beach, CA

* Actual date

Major portions of the slippage were due to delays resulting from elements beyond the control of the contractor and government coupled with necessary and calculated Coast Guard directed changes. The amount of slippage attributable to the contractor can not be commented on at this time because the delays to which the contractor is ultimately entitled has not yet been adjudicated.

SENATOR LAUTENBERG: Please also provide for the record a breakdown of appropriations, obligations, and outlays for the entire 270-Foot Cutter procurement by fiscal year and by major category of expense.

Answer:

($ MILLION)

											Estimate		
	FY77	FY78	FY79	FY80	FY81	FY82	FY83	FY84	FY85	FY86	FY87	FY88	FY89	Total[1]
Appropriations	49.0	55.8	100.8	106.4	101.9	177.1	101.8	16.2	58.0	5.5	4.4	10.0	8.5	795.4
Reprogram /2				(0.3)					(6.1)					(6.4)
Obligations														
SHIPS 1-4														
Contract /3	1.7	112.2	6.1	17.0	17.6	12.1	13.9	6.2	2.7	0.4				189.9
Escalation		2.0	5.5	1.5	14.0	5.0	18.3							46.3
Retrofit				0.1	0.1	1.2	10.2	5.8	1.8					19.2
SHIPS 5-13														
Contract /3			0.2	0.3	236.5	114.4	5.3	12.5	13.1	8.9	1.8	1.7	0.2	394.9
Escalation						12.2	20.0	15.0		9.3	6.6	6.2		69.3
Retrofit								0.2	0.2	2.1	1.9	2.1	2.0	8.5
SHORE SUPPORT														
COMDAC System /4			2.8		2.0	6.5	0.8	7.2	10.8	1.6			4.8	36.5
COMDAC SUPRTFAC					0.2	6.9		2.3	3.7	0.2			1.5	14.8
Maintenance/Pier facilities							2.1		1.8	5.5				9.4
GRAND TOTAL	1.7	114.2	14.6	18.9	270.4	158.3	70.6	49.2	34.1	28.0	10.3	10.0	8.5	788.8
Outlay	0.1	1.1	35.8	45.8	34.2	86.4	169.8	123.5	79.8	70.1				

/1 - Includes COMDAC Shore Facility Cost.

/2 - Reprogamming in fiscal year 1980 was for icebreaker retrofit. Reprogramming in fiscal year 1985 was $5 million to exercise option on 16th 110-foot WPB and $1.1 million for emergency repairs on CGC CHASE.

/3 - Includes basic contract, contract spares, modifications, and outfit. COMDAC hardware suites are also included.

/4 - Includes COMDAC software development costs of $25 million.

SENATOR LAUTENBERG: Please provide for the record a funding breakdown for the COMDAC procurement (hardware and software) showing the original projected cost, the current projected cost, the percentage of cost escalation, the reasons for such cost escalation and the cost of each, and a year-by-year summary of appropriations, obligations, and outlays for this system.

ANSWER: Our estimate for the total COMDAC system including hardware, software, training and logistics support is about $186 million broken down as follows: hardware - $131 million, software - $25 million, training and logistics - $30 million. Much of his cost is included in the ship construction contracts. The final estimated cost is slightly more than double the preliminary estimate of $85 million. When inflation for the period is considered the final estimate is in line with projects having similar degrees of technical difficulty. Specific cost data of COMDAC Program appropriations, obligations and outlays are contained in the above response.

SENATOR LAUTENBERG: You propose to spend $1.5 million to initiate a multi-year program to replace 105 44-foot Motor Lifeboats. These funds are budgeted to construct a prototype lifeboat for testing. Why do you plan to build a lifeboat from scratch instead of buying an off-the-self model -- and how much more risk does this approach entail in terms of time and money?

ANSWER: The 44 foot motor lifeboat is a very specialized piece of equipment designed for rescue operations in heavy weather and breaking surf conditions. There is no demand for such a boat in the U.S. outside of the Coast Guard, and for this reason there are no off-the-shelf commercially available boats to purchase. A number of international marine rescue organizations, mostly located in western Europe, operate heavy weather rescue boats. However, for a variety of reasons, the European lifeboats do not meet our requirements. For the most part they are too big and heavy to be operated from our facilities, and many of them are designed around features which would not be used in our operations.

SENATOR LAUTENBERG: What do you expect the total cost of the lifeboat procurement to be, over how many years will these costs be spread, and do you plan to replace your lifeboats on a one-for-one basis?

ANSWER: The total estimated cost of the Motor Lifeboat Replacement acquisition is $68 million (in FY-87 dollars) spread over 9 years from FY88 to FY96. The plan is a one-for-one replacement.

SENATOR LAUTENBERG: According to information provided last year, you plan to increase the speed of the new lifeboats from the current 11.8 knots to 26.4 knots, and decrease their endurance at maximum speed from the current 14.2 hours to 8 hours. How important is this speed-for-endurance trade-off, and will it entail significant design and cost risks to achieve this increased speed? Please expand on your answer for the record and also explain how the 26.4 knot speed requirement was determined.

ANSWER: Increased speed provides a number of important benefits such as reduced response time, less crew fatigue, improved search efficiency, and greater breaking wave avoidance capabilities. Because of our desire to man and maintain the replacement Motor Life Boats (MLBs) at our existing stations, length, beam, and weight restriction were placed on the replacement design. Given these physical restrictions, and other requirements such as hull strength and durability, and a self righting capability; a 25 knot maximum speed was considered to offer the most operating improvements with the least design risk. Going much beyond 25 knots would require a larger boat or a more exotic design. Conceptual designs studied indicated that 26.4 knots is attainable. Endurance at maximum speed should be looked at in terms of range instead of hours. The range at maximum speed will increase from 185 miles with the current 44 foot MLB, to 200 miles with the replacement. In effect the replacement boat will go farther and faster which is very important in search and rescue operations.

SENATOR LAUTENBERG: Please also provide for the record a listing of the procurement milestones and associated dates for the lifeboat replacement program.

ANSWER: 44 ft MLB replacement project procurement milestones:

Issue limited production solicitation	APR 1987
Award limited production contract	OCT 1987
Complete prototype design	MAY 1988
Complete prototype construction	MAR 1989
Complete prototype test	OCT 1989
Exercise 5 boat pre-production option	OCT 1989
Complete pre-production construction	OCT 1990
Complete pre-production evaluation	MAY 1991
Issue full production solicitation	JUN 1991
Award full production contract	SEP 1991
Complete full production contract	1996

SENATOR LAUTENBERG: Please also provide for the record a complete history of all motor lifeboats in your fleet showing name/number, when commissioned, when renovated, years of service, service life, and year replacement will be necessary.

ANSWER: There are presently 110 motor lifeboats (MLB) in service in the Coast Guard. The one remaining 36 foot MLB is past its useful life and will soon go to a museum. The four 52 foot MLBs do not have replacements planned and will continue to be used as long as they are seaworthy. The remaining 105 44 foot MLBs are listed with location, hull number, year placed in service, and year scheduled for replacement assuming a 25 year service life. Renovations occur at various intervals throughout the life of a vessel depending upon its condition. Individual records are not centrally maintained so specific renovation dates are not readily available.

BOAT NUMBER	DISTRICT	UNIT NAME	BUILT	AGE	REPLACEMENT DUE
36535	13	STA DEPOE BAY	07/12/51	36	to museum
52312	13	STA YAQUINA BAY	11/29/56	30	not planned
52313	13	STA GRAYS HARBOR	10/11/60	26	
52314	13	STA CAPE DISAPPOINTMENT	04/01/61	26	
52315	13	STA COOS BAY	10/11/61	26	

BOAT NUMBER	DISTRICT	UNIT NAME	BUILT	AGE	REPLACEMENT DUE
44300	13	MOTOR LIFEBOAT SCHOOL	03/31/61	26	1986
44308	3	STA SHINNECOCK	04/17/62	25	1987
44309	13	STA CAPE DISAPPOINTMENT	01/07/63	24	1986
44301	13	MOTOR LIFEBOAT SCHOOL	01/07/63	24	
44303	13	STA UMPQUA RIVER	01/07/63	24	
44304	13	MOTOR LIFEBOAT SCHOOL	01/07/63	24	
44306	3	STA SANDY HOOK	01/07/63	24	
44305	13	STA CHETCO RIVER	01/11/63	24	
44302	3	STA GREAT EGG	04/04/63	24	
44312	9	STA TAWAS	04/12/63	24	
44313	1	BASE SOUTH PORTLAND	04/14/63	24	
44307	1	STA POINT ALLERTON	04/17/63	24	
44311	13	STA CHETCO RIVER	04/26/63	24	
44310	9	STA ASHTABULA	05/01/63	24	
44315	1	STA MERRIMAC	06/05/63	24	
44314	3	STA ROCKAWAY	06/12/63	24	
44316	9	STA ROCHESTER	06/24/63	24	
44317	1	STA GLOUCESTER	07/10/63	24	
44318	1	STA SCITUATE	07/16/63	24	
44319	5	STA HATTERAS INLET	08/29/63	24	
44320	5	STA OREGON INLET	09/10/63	24	
44321	1	STA WOODS HOLE	09/12/63	23	1988
44322	3	STA BARNEGAT LIGHT	09/25/63	23	
44323	9	STA ST IGNACE	10/02/63	23	
44325	1	STA PORTSMOUTH HARBOR	10/24/63	23	
44324	12	STA BODEGA BAY	10/28/63	23	
44326	1	STA BOOTHBAY HARBOR	04/17/64	23	
44327	5	STA PARRAMORE BEACH	04/24/64	23	
44330	9	STA PORT HURON	04/29/64	23	
44329	3	STA MANASQUAN INLET	05/15/64	23	
44332	5	STA OCRACOKE	06/24/64	23	
44333	3	STA ATLANTIC CITY	06/30/64	23	
44347	12	STA FORT POINT	07/20/64	23	
44348	3	STA MONTAUK	07/20/64	23	
44335	13	STA CHETCO RIVER	09/04/64	23	
44336	12	STA BODEGA BAY	09/04/64	23	
44331	13	STA UMPQUA RIVER	09/04/64	23	1988
44342	3	STA SHORT BEACH	04/14/65	22	1989
44339	1	STA WOODS HOLE	06/11/65	22	
44341	3	STA FIRE ISLAND	06/29/65	22	
44340	1	STA JONESPORT	07/08/65	22	
44355	3	STA BEACH HAVEN	07/14/65	22	

BOAT NUMBER	DISTRICT	UNIT NAME	BUILT	AGE	REPLACEMENT DUE
44354	1	STA MENEMSHA	07/14/65	22	
44356	13	STA YAQUINA BAY	07/14/65	22	
44352	1	STA POINT JUDITH	07/14/65	22	
44351	1	STA EASTPORT	07/14/65	22	
44350	5	STA OCEAN CITY	07/14/65	22	
44358	8	BASE GALVESTON	07/14/65	22	
44360	3	STA INDIAN RIVER	07/14/65	22	
44363	13	STA QUILLAYUTE RIVER	07/14/65	22	
44367	5	STA CHINCOTEAGUE	07/14/65	22	
44366	5	STA OAK ISLAND	07/14/65	22	
44368	1	BASE SOUTHWEST HARBOR	07/14/65	22	
44365	1	STA ROCKLAND	07/14/65	22	
44364	13	STA NEAH BAY	07/14/65	22	
44359	9	STA MUSKEGON	07/14/65	22	
44362	3	STA CAPE MAY	07/14/65	22	
44361	13	STA COOS BAY	07/14/65	22	
44370	7	STA PONCE DE LEON	07/14/65	22	
44371	12	CGC POINT LEDGE	07/14/65	22	
44343	5	BASE FORT MACON	09/22/65	21	1990
44344	9	STA ERIE	10/10/65	21	
44349	1	STA BLOCK ISLAND	10/26/65	21	
44387	13	STA NEAH BAY	05/01/66	21	
44372	13	STA GRAYS HARBOR	05/12/66	21	1991
44373	13	STA UMPQUA RIVER	05/12/66	21	
44383	12	BASE SAN FRANCISCO	05/31/66	21	
44379	13	STA TILLAMOOK BAY	05/31/66	21	
44378	12	STA HUMBOLDT BAY	05/31/66	21	
44377	8	STA DESTIN	05/31/66	21	
44376	9	STA CHARLEVOIX	05/31/66	21	
44375	9	STA MICHIGAN CITY	05/31/66	21	
44381	13	MOTOR LIFEBOAT SCHOOL	12/30/66	20	
44385	12	STA FORT POINT	05/31/66	21	
44386	8	STA PORT OCONNOR	05/31/66	21	
44369	13	MOTOR LIFEBOAT SCHOOL	12/30/66	20	
44374	9	STA PORTAGE	02/03/67	20	1992
44345	9	STA LUDINGTON	05/23/67	20	
44382	9	STA HOLLAND	03/25/68	19	1993
44380	9	STA BUFFALO	05/10/68	19	
44384	9	STA DULUTH	07/03/68	19	
44389	9	STA SAINT JOSEPH	10/22/68	18	
44388	9	STA FRANKFORT	10/22/68	18	
44390	9	STA OSWEGO	10/23/68	18	
44391	9	STA NIAGARA	10/23/68	18	
44891	9	STA MARQUETTE	11/21/68	18	
44890	9	NINTH DISTRICT	11/21/68	18	
44393	13	STA QUILLAYUTE RIVER	07/30/69	18	1994

BOAT NUMBER	DISTRICT	UNIT NAME	BUILT	AGE	REPLACEMENT DUE
44394	13	STA SIUSLAW RIVER	08/14/69	18	
44395	8	STA PORT ISABEL	09/30/69	17	1994
44397	1	STA PROVINCETOWN	06/22/71	16	1996
44396	12	STA HUMBOLDT BAY	07/02/71	16	
44398	1	STA BRANT POINT	08/19/71	16	
44400	13	STA YAQUINA BAY	08/30/71	16	
44401	13	STA SIUSAW RIVER	09/14/71	15	
44403	1	STA CHATHAM	12/23/71	15	
44402	1	STA CHATHAM	12/29/71	15	
44407	13	STA DEPOE BAY	02/02/72	15	1997
44406	13	STA GRAYS HARBOR	02/02/72	15	
44408	13	STA COOS BAY	02/02/72	15	
44409	13	STA TILLAMOOK BAY	02/06/72	15	
44404	5	STA WRIGHTSVILLE BEACH	05/01/72	15	
44405	3	STA MORICHES	10/08/72	14	
44346	12	GROUP MONTEREY	05/08/73	14	1998

SENATOR LAUTENBERG: You are requesting $139 million to continue the FRAM program for the 378-foot cutters. Is this work now proceeding on track and on budget?

ANSWER: This complex renovation and modernization program is in progress at Bath Iron Works, on the east coast and Todd Seattle, on the west coast. Both prime contractors and the Coast Guard have experienced some start-up problems that have caused schedule delays. In addition, the unanticipated major repairs required to the HAMILTON's reduction gears have caused substantial delays on the East Coast. MELLON, the lead ship at Todd, is about one year behind schedule. Bath Iron Works indicates that HAMILTON delivery will occur about one year after the reduction gear repairs are complete. Reduction gear repairs are projected for completion in late May. There will be some schedule delays for the follow-on ships. The schedule delay, as well as the start-up problems, will result in some cost growth the amount of which has not yet been negotiated with the prime contractors.

SENATOR LAUTENBERG: And, do you expect any significant new delays in this program?

ANSWER: No significant new delays are now anticipated.

SENATOR LAUTENBERG: After the FRAM is completed, what will be the maximum speed of these cutters compared to their "pre-FRAM" speed?

ANSWER: Pre-FRAM speed was 29 knots. Post-FRAM speed is expected to be 26 knots.

SENATOR LAUTENBERG: Have you been able to keep the type of FRAM work essentially to what had been originally estimated, or have you had to make significant modifications to the FRAM contract once work was started?

ANSWER: With the exception of major repairs to the HAMILTON reduction gears and a modification to the Combat Information Center, the work remains as originally intended. Most of the contract modifications address clarifications or repairs to conditions found in "open and inspect" items. As a matter of policy, the Coast Guard has "frozen" the design allowing only those changes necessary to accomplish our original intent in the FRAM Project.

SENATOR LAUTENBERG: If so, how expensive have these modifications been?

ANSWER: Installation of a Tactical Towed Array Sonar System (TACTASS) was included in the original FRAM design and contract specifications. In May 1984, while in the contract pre-award process, TACTASS was eliminated due to recommendations of a wartime tasking study. After elimination of this equipment, relocation of the Combat Information Center display and indicating equipment was required. The Coast Guard completed planning and engineering work in time to modify the contracts shortly after award so that design impact was minimal. This modification increased the contract price by a total of $14 million covering all 12 ships in the project.

SENATOR LAUTENBERG: Please provide for the record a detailed breakdown of your $139 million FRAM request.

ANSWER:

FY 1988 REQUEST	(in thousands of dollars)
COSTS	
Logistic Support	$ 18,060
Contracts	123,900
Related Costs	6,040
Total	$148,000
FUNDING	
Coast Guard Appropriation	$139,000
Navy Appropriation (equipment installation; $3 million per ship)	9,000
Total	$148,000

SENATOR LAUTENBERG: Please also provide a breakdown of FRAM appropriations, obligations, and outlays by ship for fiscal years 1982 through 1989.

ANSWER:

FRAM APPROPRIATIONS, OBLIGATIONS AND OUTLAYS

(in millions of dollars)

	82-84	1985	1986	1987	1988	1989	1990	TOT
Approp	82.1	73.4	55.5	123.0	139.0	79.6	5.9	558.5
Navy Funding		9.0	9.0	9.0	9.0			36.0
Obligations	3.1	121.5	83.1	145.9	152.4	86.3	5.9	598.2
Navy Equipment								270.0
FRAM Program total								868.2

SENATOR LAUTENBERG: Please also provide for the record a breakdown of the 378′ foot FRAM contracts.

ANSWER: FRAM contracts were awarded in June 1985 to two commercial shipyards, Bath Iron Works, Bath, Maine and Todd

Pacific Shipyard, Seattle, Washington. Both are multi-year, firm fixed price contracts with provisions for economic price adjustment. The award price for 4 ships at Bath Iron Works was $116 million and for 8 ships at Todd was $236 million.

SENATOR LAUTENBERG: You are requesting $39 million to continue your "Mid-Life Maintenance Availability" (MMA) program for your 210-foot cutters. Five of the 16 cutters are to be overhauled at the Coast Guard Yard in Maryland, and the remainder will be repaired at private shipyards. The private contract was to be awarded in June 1986. Who received the private contract and at what costs per ship?

ANSWER: The contract was awarded to Colonna's Shipyard Inc., Norfolk, VA. in September 1986. The production cost per ship was $5,930,052.

SENATOR LAUTENBERG: Please provide for the record an update of the 210-foot cutter service life and MMA schedule data found on page 816 of last year's House Subcommittee Hearing Record?

ANSWER:

210 WMEC MMA SCHEDULE

Cutter	Original Homeport	Final Homeport	Yard Entry	Yard Departure
"A" Class				
ACTIVE	New Castle	Port Angeles	01 OCT 84	DEPARTED
CONFIDENCE	Port Angeles	New Bedford	18 OCT 86	03 MAR 88
RELIANCE	Cape Canaveral	Cape Canaveral	06 APR 87	04 AUG 88
VIGILANT	New Bedford	Cape Canaveral	01 FEB 88	06 AUG 89
DILIGENCE	Cape Canaveral	New Castle	05 JUL 88	02 MAR 90
"B" Class				
DURABLE	Brownsville	Panama City	01 OCT 86	17 DEC 87
COURAGEOUS	Key West	Galveston	02 MAR 87	18 APR 88
DEPENDABLE	Panama City	St. Petersburg	01 DEC 87	15 AUG 88
VALIANT	Galveston	St. Petersburg	01 APR 88	15 DEC 88
STEADFAST	St. Petersburg	Long Beach	01 AUG 88	17 APR 89
DECISIVE	St. Petersburg	Cape May	01 DEC 88	15 AUG 89
VENTUROUS	Long Beach	Miami	03 APR 89	18 DEC 89
ALERT	Cape May	New London	01 AUG 89	16 APR 90
DAUNTLESS	Miami	Astoria	04 DEC 89	20 AUG 90
VIGOROUS	New London	Brownsville	02 APR 90	17 DEC 90
RESOLUTE	Astoria	Key West	06 AUG 90	24 APR 91

SENATOR LAUTENBERG: Please also provide separate cost breakdowns per cutter for the "A" Class and the "B" Class cutters, and also show what shipyard will perform this work for each cutter.

ANSWER:

BREAKDOWN OF COSTS PER CUTTER FOR 210' WMEC MMA

	"A" Class	"B" Class
Long Lead Time Material	4,745,000	2,500,000
Electronics	125,000	125,000
Production Costs	10,675,000	10,400,000
Engineering Design	681,000	200,000
Provisioning	175,000	250,000
Contract Administration	0	1,000,000
Total/Cutter	$16,401,000*	$14,475,000**

*Based on actual cost of CGC ACTIVE.
**No change in estimate, because CGC DURABLE has not been delivered.

All "A" Class cutters will be repaired at Coast Guard YARD, Curtis Bay, MD. All "B" Class cutters will be repaired at Colonna's Shipyard Inc., Norfolk, Virginia.

SENATOR LAUTENBERG: Please also provide explanations for any delay in starting MMA work of over one month from the dates reported to the Committee last year.

ANSWER: The "B" Class contract was delayed four months starting with the next cutter (CGC DEPENDABLE) into the shipyard. This was due to the late award of the "B" Class contract caused by the late design and specification package development.

SENATOR LAUTENBERG: Please also provide for the record a breakdown of the 210-foot MMA contracts.

ANSWER:

210 WMEC MAJOR MAINTENANCE AVAILABILITY (MMA) CONTRACTS
(Dollars in Millions)

	Coast Guard YARD (1-5) Curtis Bay, MD "A" Class	Colonna's Shipyard Inc. (6-16) Norfolk, VA "B" Class	
Fiscal Year	Project Orders	Contract and Mods	Escalation
1982	0.25		
1983	21.75 *		
1984	21.79 *	0.27	
1985	6.02	1.82	
1986	19.84	14.73	**
1987	2.01	15.13	**
1988	pends	pends	
1989	pends	pends	
1990	pends	pends	
Total	71.66	31.95	

* Project orders at CG YARD were utilized to fund both "A" & "B" Class Long Lead Time Material (LLTM).
** There will be economic price adjustments equal to the current inflation rate each year.

SENATOR LAUTENBERG: Please also provide for the record a comparison of 210-foot MMA appropriations, obligations, and outlays by ship for each fiscal year between fiscal years 1982 and 1989.

ANSWER:

FISCAL YEAR	DESCRIPTION	APPROPRIATION	OBLIGATIONS	OUTLAYS
1982	210' MMA LLTM	6,000,000	250,000	0
1983	210' MMA LLTM	16,000,000	19,811,798	317,773
1984	LLTM, A-1* PARTIAL, PRODUCTION MAT.	34,300,000	21,289,851	1,928,854
1985	LLTM, A-1&2 PARTIAL, PRODUCTION MAT.	15,050,000	9,092,800	8,023,245
1986	LLTM, A-2 PARTIAL, B-1, B-2, PROD. MAT.	25,500,000	35,496,318	8,529,135
1987	LLTM, A-3, B-3, PRODUCTION MAT.	11,500,000	14,533,962	109,289
	TOTAL	$108,350,000	$100,474,729	$18,908,296

Accounting data for appropriations, obligations, and outlays are not available by ship because two shipyards are involved and some of the long lead time material (LLTM) for the "B" class was purchased by the Coast Guard Yard.

* A-1 first vessel of A-Class, A-2 second vessel, etc. Similarily for B-Class vessels.

SENATOR LAUTENBERG: Please also provide for the record the breakdown of appropriations, obligations, and outlays for the SLEP program by fiscal year since F.Y. 1980.

ANSWER:

180' WLB SERVICE LIFE EXTENSION (SLEP) PROJECT

CUTTER	POST-SLEP HOMEPORT	EST COST	OBLIG.	OUTLAYS
SORREL	GOVERNOR'S ISL., NY	9,300,000	9,293,000	9,268,000
GENTIAN	MOREHEAD CITY, NC	9,300,000	9,099,000	9,074,000
COWSLIP	PORTSMOUTH, VA	9,500,000	9,232,000	9,182,000
CONIFER	SAN PEDRO, CA	10,325,000	10,193,000	9,225,000
MADRONA	CHARLESTON, SC	11,461,000	10,000,000	4,250,000
LAUREL	MAYPORT, FL	11,696,000	10,196,000	1,665,000
PAPAW	SAN JUAN, PR	12,094,000	3,941,000	0
SWEETGUM	GALVESTON, TX	12,342,000	3,842,000	0
SAGEBRUSH	MOBILE. AL	12,762,000	3,828,000	0
BUTTONWOOD	SAN FRANCISCO, CA	13,023,000	1,673,000	0
SALVIA	KETCHIKAN, AK	13,466,000	1,673,000	0
BLACKHAW	HONOLULU, HI	13,742,000	1,673,000	0
PLANETREE	GUAM, MI	14,210,000	1,673,000	0
MALLOW	ASTORIA, OR	14,501,000	1,673,000	0
	SPARE PARTS	500,000	140,000	54,000
	PROJECT DESIGN & CHANGES	500,000	75,000	50,000
	TOTAL	$168,722,000	$78,204,000	$42,768,000

FISCAL YEAR	DESCRIPTION	APPROP.	OBLIGATIONS	OUTLAYS
1980	SLEP PRELIM DESIGN & SPECS	1,405,000	5,526,000	1,955,000
1981	SLEP SHIPS #1 AND #2	13,916,000	9,683,000	2,047,000
1982	SLEP SHIP #3 & FINISH 1&2	11,500,000	11,101,000	5,639,000
1983	SLEP #4 AND #5	19,000,000	13,697,000	746,000
1984	SLEP #6 AND #7 + SPARE PTS	19,285,000	14,025,000	22,047,000
1985	SLEP #8 AND #9	18,000,000	8,257,000	7,696,000
1986		0	13,629,000	2,599,000
1987	LLTM FOR #10 THRU #14	14,100,000	2,286,000	39,000
	TOTAL	$97,206,000	$78,204,000	$42,768,000

SENATOR LAUTENBERG: You are requesting $2 million to support a "Parallel-Track" approach to explore replacing the NORTHWIND and WESTWIND Polar icebreakers. You plan to continue design work and at the same time evaluate a lease arrangement for icebreaker capabilities. Would you explain more fully what this lease arrangement would entail?

ANSWER: The lease arrangement would entail a long term lease, possibly up to thirty years. We anticipate two parts to the lease: a bareboat charter, and a separate operating concept for the vessel.

SENATOR LAUTENBERG: Last year, we received testimony that one of the design issues surrounding the new icebreakers had to do with how much enhanced scientific capability these vessels should have. Could you elaborate on this issue?

ANSWER: The Polar Icebreaker Requirements Study (PIRS) of 1984 directed the Coast Guard to consult with the User's Council and stated the design should "enhance research support...". The Coast Guard has consulted with the User's Council in the design, and, in general, they are satisfied with the design of the Coast Guard's Polar Icebreaker Replacement.

SENATOR LAUTENBERG: Who are the primary users of your icebreaking services and should they share in the cost of these new vessels (if it is decided they will be built)?

ANSWER: Primary users of polar icebreaker services are the Navy (for Department of Defense programs) and the National Science Foundation. Occasional users are the Maritime Administration, National Oceanic and Atmospheric Administration, Geological Survey and others. These agencies reimburse the Coast Guard for icebreaker depolyment costs as a matter of routine, but they should not share in the cost of building replacements. Funding issues were addressed and resolved in the Polar Icebreaker Requirements Study of July 1984. The conclusion of this comprehensive interagency study was that replacement costs should be funded in the Coast Guard budget. There are no savings to the government in fragmenting acquisition costs in several agency budgets, and it would unnecessarily complicate a major procurement.

SENATOR LAUTENBERG: Please provide for the record a table on the characteristics of the new polar icebreaker's under design and how they compare with the characteristics of the NORTHWIND and the WESTWIND.

ANSWER: Preliminary Design characteristics of the polar icebreaker replacement completed in September 1986 are:

Length, Overall-460 feet.
Beam, Max-95 feet.
Draft Full Load 32 feet.
Displacement-18,000 long tons.
Shaft Horsepower-30,000 hp.
Cruise Speed-12.5 knots.
Icebreaking-4-5 feet continuously at 3 kts.
8.0+ feet by backing & ramming.
Endurance-80 day mission profile for fuel
180 days of provisions and consumables.
Survivability-2 compartment floodable length standard.
Science-30 person science party, enhanced science capabilities, user input incorporated in design.
Crew-110 military personnel.

The characteristics of the Wind Class Icebreakers (Northwind and Westwind) are:

Length, Overall-269 feet.
Beam, Max-64 feet.
Draft, Full load-28 feet.
Displacement-6260 long tons.
Shaft Horsepower-10,000 hp.
Cruise Speed-10 knots.
Icebreaking-3 feet continuous at 3 kts.
11 feet by backing and ramming.
Endurance-38,000 nm @ 10 kts.
180 days of provisions and consumables.
Survivability-2 compartment floodable length standard.
Science-12 person science party (in 12-man room); poor lab space, minimal support equip.
Crew-153 military personnel.

SENATOR LAUTENBERG: You have allocated a total of $180.35 million of fiscal year 1986 and 1987 Coastal Defense Funds for the replacement of your Medium Range Recovery (MRR) helicopters. What is the total cost of this program, how many helicopters do you plan to buy, and do you propose replacing your existing MRR helicopters on a one-for-one basis?

ANSWER: Total program cost is $454.6 million which will buy 32. The 32 new helicopters will replace 37 HH 3F helicopters. A total of $224.1 million for this project has been allocated from the 1986 and 1987 Coastal Defense Funds.

SENATOR LAUTENBERG: You are now also undertaking the new MRR procurement, did you reevaluate your relative mix between SRR and MRR aircraft to see if the cheaper SRR's might be used at some stations instead of the more expensive MRR's?

ANSWER: Yes, a thorough review of our short range (SRR) and medium range recovery (MRR) helicopters was completed to determine the number of MRR helicopters needed to meet Coast Guard mission requirements. The results indicated a need for a fleet size of 32

MRR helicopters, a decrease of eight from the 40 HH-3F helicopters initially purchased. A fleet size of 32 does not include the three additional MRR aircraft required to support the Air Facility Cold Bay, Alaska initiative. The addition of the new SRR helicopter to our fleet and the redistribution of our aircraft have allowed for these savings.

SENATOR LAUTENBERG: Please provide for the record your evaluation of the cost savings and mission impact for each of the following possible deployment changes -- a mix of 2 MRR and 4 SRR aircraft at Kodiak in lieu of 4 MRR and 2 SRR aircraft.

ANSWER: The current mix of helicopters at Air Station Kodiak is 4 MRR and 4 SRR not 4 MRR and 2 SRR as you have indicated.

The primary advantages of the MRR helicopter over the new SRR is its extended range (300 vs 150 nautical mile radius of action), greater survivor recovery capacity (6 vs 3 people), its increased external lift capability, and its ability to fly in more adverse weather conditions. Initial indications are that replacing a MRR helicopter with an SRR helicopter will save approximately $160,000 per year in operating costs plus the difference in the up front purchase price of each.

Support of the SAR mission has been the primary concern in the allocation and assignment of Coast Guard aviation resources. The MRR helicopters are assigned to Air Station Kodiak to support a year round SAR readiness at Kodiak, a summer SAR readiness at Cordova, and extensive North Slope ATON deployments. The lack of refueling opportunities and the inflight icing and heavy turbulence often encountered along the mountainous coastal areas of Alaska severely restrict the operation of the SRR helicopter. The MRR helicopter represents the minimum capabilities acceptable for the safe prosecution of SAR cases in the routinely harsh Alaskan flight environment.

Further, the primary goal of the SAR program is to be ready to respond to an unforecast distress. Therefore, as in the case with an ambulance or a fire truck, the value of the aircraft lies in its availability to respond when needed. An analysis of the SAR resource requirements indicates a need for a minimum of 3 helicopters of the same type at an air station to maintain a SAR readiness posture. Reducing the number of MRR helicopters to 2 would have a serious negative impact on our SAR capability in Alaska. Moreover, the SRR helicopters are assigned to Kodiak solely to support open sea shipboard operations where flight schedules can be adjusted for weather conditions.

SENATOR LAUTENBERG: Please also provide for the record a comparison of the cost and performance characteristics of your new short range and medium range helicopters.

ANSWER: The following table summarizes the cost and performance comparison between the Coast Guard's new short range recovery (SRR) and medium range recovery (MRR) helicopters.

SRR AND MRR HELICOPTER COMPARISON

	SRR	MRR
Cost per Airframe ($ in millions)	$4.5	$10.5
Operating, Maintenance, and Personnel Costs ($ per hour)	$1,470	$1,700
Maximum Gross Weight (pounds)	8,000	22,000

Cruise Speed (knots)	125	140
Normal Endurance (hours)	3.0	3.5
Maximum Endurance (hours)	3.5	6.0
Maximum Speed (knots)	165	150
Maximum Range (nautical miles)	400	700
Radius of Action (one-half hour on scene) (nautical miles)	150	300

SENATOR LAUTENBERG: Please also provide for the record a breakdown of your Medium Range Helicopter Replacement program appropriations, obligations, and outlays by fiscal year (including planned outyear expenditures). Please also show the number of aircraft and other major items to be procured each.

ANSWER:

Funding/Obligation Plan

($ in millions)

	FY86	FY87	FY88	FY89	FY90	FY91	FY92	FY93
Funds Appropriated or planned	44.1	180.0	0	108.3	93.4	20.7	8.1	0
Obligation/Commitments	0	124.1	100	108.3	93.4	20.7	8.1	0
Balance	44.1	100.0	0	0	0	0	0	0

Acquisition Cost Estimates

	FY86	FY87	FY88	FY89	FY90	FY91	FY92	Total
Nu. Aircraft	2	15	0	8	7	0	0	32
Aircraft	$38.1	$152.9	$0	$79.3	$66.8	$0	$0	$337.1
Support	2.9	6.7	0	9.0	10.2	5.7	3.1	37.6
Spares	3.1	20.4	0	20.0	16.4	15.0	5.0	79.9
Estimated Cost	44.1	180.0	0	108.3	93.4	20.7	8.1	454.6
Appropriations	44.1	180.0	0	0	0	0	0	
Obligations	0	124.0	0	0	0	0	0	

Outlays: Contract is administered by the U.S. Navy and thus controls outlays.

SENATOR LAUTENBERG: Please also provide for the record a breakdown of your existing MRR helicopter fleet showing identification number, base of operation, the year delivered, expected service life, and date when each is expected to be replaced.

ANSWER: The Coast Guard took delivery of its current MRR helicopter (Sikorsky HH-3F) between 1969 and 1973. 36 of the original 40 aircraft purchased remain in service; the 4 aircraft being attrited by crash damage. Specific replacement dates have not been developed, but the new MRR helicopter (Sikorsky HH-60J) is tentatively scheduled to replace the HH-3F between November 1990 and July 1993. This schedule will allow replacement to coincide closely with the HH-3F's effective service life of twenty years.

The following is a list of the current MRR fleet:

HH-3F MRR HELICOPTER FLEET

A/C	DATE DELIVERED	AIR STATION
1430	16 MAY 1969	CLEARWATER
1431	11 DEC 1969	TRAVERSE CITY
1433	6 JAN 1969	ARSC
1434	6 JAN 1969	SITKA
1435	7 FEB 1969	ASTORIA
1437	7 MAR 1969	KODIAK
1438	10 MAR 1969	CAPE COD
1467	21 JUN 1969	KODIAK
1468	6 MAY 1969	TRAVERSE CITY
1469	16 MAY 1969	TRAVERSE CITY
1470	29 MAY 1969	KODIAK
1471	12 JUN 1969	SAN FRANCISCO
1472	18 JUL 1969	CAPE COD
1475	21 OCT 1969	MOBILE
1476	7 NOV 1969	CLEARWATER
1477	25 NOV 1969	MOBILE
1478	18 DEC 1969	ARSC
1479	18 FEB 1970	ELIZABETH CITY
1480	2 FEB 1972	SAN FRANCISCO
1481	29 FEB 1972	ELIZABETH CITY
1482	30 MAR 1972	SITKA
1483	28 APR 1972	ELIZABETH CITY
1484	30 MAY 1972	SAN FRANCISCO
1485	30 JUN 1972	KODIAK
1486	28 JUL 1972	SITKA
1487	14 AUG 1972	ASTORIA
1488	29 SEP 1972	CLEARWATER
1489	31 OCT 1972	CAPE COD
1490	30 NOV 1972	ARSC
1491	29 DEC 1972	MOBILE
1492	31 JAN 1973	ARSC
1493	22 FEB 1973	ARSC
1494	30 MAR 1973	CLEARWATER
1495	22 MAY 1973	CAPE COD
1496	6 JUN 1973	ARSC
1497	11 JUL 1973	ASTORIA

SENATOR LAUTENBERG: Please provide for the record an updated table of SRR procurement costs.

ANSWER: An updated SRR helicopter procurement cost table is provided as requested.

SRR HELICOPTER PROCUREMENT

		FY79	FY80	FY81	FY82	FY83
Aircraft	Original	10	13	14	32	21
(Quantity)	Current	10	13	14	32	27

CONTRACT PROCUREMENT COSTS ($MILLION)
(Comparison of Original versus Current Contract)

		FY79	FY80	FY81	FY82	FY83
Aircraft	Original	22.1	28.7	30.9	70.7	46.4
	Current	22.1	28.7	30.9	70.7	77.0
Reliability Assurance Warranty (RAW)	Original	--	--	10.9	--	--
	Current	--	--	10.9	--	--
Technical Representative	Original	--	--	0.9	--	--
	Current	--	--	0.9	--	--
Training	Original	--	1.0	1.3	1.5	--
	Current	--	1.0	1.2	1.4	--
Spares	Original	--	6.1	8.1	8.2	16.1
	Current	--	6.1	8.1	8.2	16.1
Spares Escalation	Original	--	0.7	1.8	2.7	7.3
	Current	--	1.5	3.2	4.8	12.8
Contract Administration	Original	0.1	0.2	0.2	0.1	0.1
	Current	0.2	0.2	0.2	0.1	0.1
Contract Economic Price Adjustment (EPA) for Aircraft, RAW,Training	Original	1.4	3.8	8.6	12.1	15.4
	Current	0.9	7.2	12.3	14.3	16.0
Annual Percentage Increase Due EPA	Original	0.7%	2.4%	6.5%	12.1%	19.3%
	Current	0.4%	3.8%	9.6%	16.3%	23.8%

SRR HELICOPTER PROCUREMENT

		FY84	FY85	FY86	FY87	FY88	TOTAL
Aircraft (Quantity)	Original						90
	Current						96

CONTRACT PROCUREMENT COSTS ($MILLION)
(Comparison of Original versus Current Contract)

		FY84	FY85	FY86	FY87	FY88	TOTAL
Aircraft	Original	--	--	--	--	--	198.8
	Current	--	--	--	--	--	229.4
Reliability Assurance Warranty (RAW)	Original	--	--	--	--	--	10.9
	Current	--	--	--	--	--	10.9
Technical Representative	Original	--	--	--	--	--	0.9
	Current	--	--	--	--	--	0.9

Training	Original	--	--	--	--	--	3.8
	Current	--	--	--	--	--	3.6
Spares	Original	--	--	--	--	--	38.5
	Current	4.0	8.5	13.4	7.1	--	71.5
Spares Escalation	Original	--	--	--	--	--	12.5
	Current	--	2.0	4.0	--	--	28.3
Contract Administration	Original	0.1	0.1	--	--	--	0.9
	Current	0.2	0.3	0.7	0.6	0.2	2.8
Contract Economic Price Adjustment (EPA for Aircraft, RAW,Training)	Original	19.8	20.6	5.8	--	--	87.5
	Current	16.5	10.4	0.4	--	--	78.0
			TOTAL		Original		353.8
					Current		425.4
Annual Percentage Increase Due EPA (Cumulative)	Original	28.6%	38.3%	41.0%	--	--	41.0%
	Current	32.6%	38.7%	37.0%	--	--	37.0%

SENATOR LAUTENBERG: Please include an explanation of any change from last year's.

ANSWER: Two items have varied from last year's submission: Spares and Economic Price Adjustments (EPA). The outyear requirement for an additional $12 Million in spares has been cancelled. Economic Price Adjustment costs have now been finalized with the completion of the last EPA period. As indicated last year, Economic Price Adjustments were overestimated during the period when inflation was running over 15%.

SENATOR LAUTENBERG: You allocated $23 million of the $200 million provided under the fiscal year 1987 Coastal Defense Account for Aerostat surveillance systems. According to your December 11 report to the Committee, you were experiencing problems with both competing contractors. I believe that the radars especially were causing problems. Would you update us on the status of your aerostat procurement--are you close to cancelling this project--or have the problems been worked out?

ANSWER: The aerostat is a valuable resource for detection of surface vessels and potentially aircraft, thus increasing the efficiency of the illegal drug interdiction effort. We are not considering cancelling this project. We are using both the RCA and the TCOM systems operationally and are completing negotiations with RCA so that fully capable follow-on systems are procured.

The TCOM system failed to meet contract requirements specifically in the area of radar performance and could not be accepted under the aerostat procurement. Since the TCOM system was an improvement over those previously leased, we chose to take advantage of its limited capability in the war on illegal drugs and leased it for one year, at least until delivery of RCA follow-on systems.

The Coast Guard conditionally accepted the RCA system on December 2, 1986. Between then and March 30, 1987 we deployed the RCA system on a modified fly-off operational evaluation for gathering reliability and maintainability data. We expanded the operating envelope, developed operational experience and developed maintenance history during this evaluation. The reliability and maintainability data collected to date has not been completely analyzed but indicate that the RCA system has not met some specification requirements. Specifically, operational availability for the system is required to be 90% and the RCA system, although improving with experience, reached about 76% during the evaluation. We are working these problems out with RCA. We have begun operational deployments of the system for law enforcement in the Caribbean area and negotiations are in progress to acquire additional aerostat systems under existing contract options. These systems will be enhanced with air search capabilities.

SENATOR LAUTENBERG: You are requesting $5 million to begin a program to remove and replace underground fuel storage tanks that are leaking. What will be the total cost of this effort, and how serious is this problem?

ANSWER: In 1986, we identified approximately 1000 fuel storage tanks Coast Guard-wide, of which the Environmental Protection Agency estimates 400 are leaking now. We expect to replace nearly 700 fuel tanks over the next five years. Total cost for replacement and cleanup cannot be accurately estimated at this time. However, replacement and cleanup cost are expected to range from $200,000 to over $1 million per site for approximately 70 sites.

SENATOR LAUTENBERG: Please provide for the record a site-by-site breakdown of the cost of replacing your fuel storage tanks, when you plan to fund each of these projects, and when you expect that new tanks will be installed.

ANSWER: The following is an expected breakdown of required AC&I funding including those sites currently identified:

SITE	FY88	FY89	FY90	YR INSTALLED
Kodiak	1,500,000	10,000,000	2,300,000	1988-90
Elizabeth City	1,500,000	1,000,000		1988-89
Petaluma	1,000,000			1988
ATC Mobile	360,000			1988
Misc Sites	640,000	2,000,000	unknown	1988-92
TOTAL	5,000,000	13,000,000	2,300,000+	

Operating Expense funding will be used to install and operate monitoring systems and replace tanks which do not involve significant cleanup efforts.

ALTERATION OF BRIDGES

SENATOR LAUTENBERG: You are not requesting any funds for Alteration of Bridges. What is your present unobligated balance under this appropriation?

ANSWER: The present unobligated balance is $29.9 million as of May 1987. This amount includes $13.5 million received from the Newark Bridge bankruptcy proceedings.

SENATOR LAUTENBERG: Would you provide for the record a breakdown of your unobligated balance, indicating the project for which the funds were appropriated.

ANSWER: The information follows:

PROJECT	UNOBLIGATED BALANCE
Newark Bay - Central New Jersey Railroad Bridge	$7.9 million
Willamette River - Burlington Northern Railroad Bridge	$22.0 million
Total	$29.9 million*

*Includes $13.5 million received from the Newark Bridge bankruptcy proceedings

SENATOR LAUTENBERG: In past fiscal years, Congress has provided funding for the Willamette River Bridge in Portland, Oregon and the Trent River Railroad Bridge in New Bern, North Carolina. What is the status of these projects?

ANSWER: The award of the contract for the Burlington Northern Railroad Bridge project over the Willamette River is scheduled for the latter part of May 1987. In the case of the Trent River Railroad Bridge, the State of North Carolina, agent for the bridge owners, agreed with the Coast Guard to a cost sharing arrangement under which the Coast Guard will pay $1.2 million of the approximately $2.0 million project. The Coast Guard has recently approved the alteration design fee and authorized the State to proceed with the design phase of the project.

SENATOR LAUTHENBERG: Will you have sufficient unobligated funds to continue these projects during fiscal year 1988?

ANSWER: There are currently $22.0 million available for these projects. This includes $10.2 million of the reimbursement the Coast Guard has received for previous work involved in the removal of the Central New Jersey Railroad Bridge in Newark Bay, New Jersey These funds will carry the projects through fiscal year 1988.

SENATOR LAUTHENBERG: Last year it was indicated that you had a total of about $10.9 million in unobligated funds from the Newark Bay project which had already been completed. Are these funds still available? If not, what happened to them?

ANSWER: Only the first phase of the project, removal of the center navigational span of the bridge, has been completed. The current phase involves the removal of the remaining spans, which are deteriorating and are a hazard to navigation. Of the $10.9 million reported last year, $7.9 million is still available for this project. $2.5 million was used in settlement of a claim by the original contractor from the first phase of the contract. $0.5 million was used to fund project start-up costs.

RETIRED PAY

SENATOR LAUTENBERG: You received an appropriation of $364 million for retired pay in fiscal year 1987. Is your current fiscal year obligation rate consistent with this total funding level?

ANSWER: No, the current obligation rate is $29,192,000 per month. This rate, if continued, would result in a total obligation of $350,298,000. However, this rate will increase during the summer months due to an increase in the number of personnel commencing retirement in that period and because of the lag in the accounting of health care costs.

SENATOR LAUTENBERG: Would you indicate for the record your actual obligations to date during fiscal year 1987 and your estimated monthly obligations for the balance of the year?

ANSWER: Actual obligations to date (through end of MAR 87) are $175,149,000. Estimated monthly obligations for remainder of fiscal year 1987:

APRIL	$29,800,000
MAY	$29,850,000
JUNE	$29,900,000
JULY	$30,300,000
AUGUST	$30,300,000
SEPT	$30,400,000

SENATOR LAUTENBERG: You are proposing a $4.6 million, or about 14 percent, increase in medical care. What is the basis for this projected increase?

ANSWER: The projected increase was based on the use of Department of Commerce "Industrial Outlook Projection" statistics for cost increases for the entire health care industry for the remainder of the decade.

RESERVE TRAINING

SENATOR LAUTENBERG: Would you indicate for the record how you arrived at your $1,642,000 increase for annualization of the fiscal year 1987 pay raise?

ANSWER: For FY 1988, $1,642,000 is required to annualize the FY 1987 pay raise effective for the full year. This amount includes pay costs associated with the 3 per cent increase in pay for military and civilian personnel. The following estimates were based upon OMB Bulletin No. 87-5:

	Direct Pay	Related Costs	Additional Appropriation Required
Civilian...	$ 81,000	$17,000	$ 98,000
Military...	1,484,000	60,000	1,544,000
	$1,565,000	$77,000	$1,642,000

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

SENATOR LAUTENBERG: What do you feel has been the most significant accomplishment of your research, development, test, and evaluation program during the past year?

ANSWER: Our marine fire and safety research program was particularly successful during the past year. Over 30 major tasks & 10 major deliverables were completed. Projects included tests and evaluations of: smoke and gas hazards of shipboard accommodation spaces, cargo fires aboard roll-on/roll-off vessels, and fire resistance of bulkhead penetrations.

SENATOR LAUTENBERG: Would you provide for the record some of the new or improved equipment that you have developed through your research in the past two or three years that is currently being used in your day-to-day activities?

ANSWER: The following equipment recently developed or improved by our research and development program is being used in day-to-day activities:

Joint Search and Rescue Satellite Aided Tracking (SARSAT) project: Resulted in over 650 lives saved worldwide.

Short Range Aid-to-Navigation System Design Manual for Restricted Waterways: Instructs Coast Guard personnel on best aid designs for least cost.

Automated Aids Positioning System: For faster, more accurate aid-to-navigation positioning and automated record keeping. The system has shown a high degree of operational effectiveness aboard the Coast Guard Cutter RED OAK.

Ocean Dumping Monitoring System: Being used to monitor waste-dumping operations at sea to ensure compliance with laws and regulations.

Rudder Roll Stabilization System: Counteracts ship motions in heavy seas to provide a stable platform for helicopter landings; also improves crew morale. First generation system operational aboard Coast Guard Cutters MELLON since 1976 and JARVIS since 1979; a second generation system has been aboard Coast Guard Cutter MORGENTHAU since 1986.

National Search and Rescue Manual: Developed visual detection parameters and sweep-width tables that have improved the utility and effectiveness of this handbook.

Military Pay Model: Computer software that identifies all components of military pay forecasting, allowing more accurate budget estimation.

Engine and seal-fit modifications and air flow redesign for the lift fan system on our Surface Effect Ship fleet have resulted in speed improvements of 60-70 percent over the past two years.

Several computer software programs have been developed and are in daily use in support of vessel acquisition: PATROL (law enforcement simulation) model, Search and Rescue model, CASHWHARS (life cycle costing) model.

Mobile Laboratory: For conducting on-site hazardous chemical analysis at spill sites and hazardous waste dump sites.

Portable Personal Chemical Monitor: Being used on a trial basis by spill response strike teams.

SENATOR LAUTENBERG: It was also indicated last year that you were converting 10,000 aids to navigation to solar powered buoys. Would you indicate for the record the estimated annual cost savings resulting from this conversion and also indicate how well these buoys are working?

ANSWER: The Coast Guard has, for the last three and one-half years, been replacing the primary battery power systems on lighted aids to navigation with solar powered systems. Ten thousand of our sixteen thousand lighted aids are scheduled (suitable) for the retrofit. Of these, about 7,500 are fixed structures and 2,500 buoys.

The estimated annual savings upon completion of the project will be in excess of $2 million. Previous budgets have included recurring reductions totaling $537.5K. The FY88 budget increases this by an additional $686.0K.

The converted systems are performing extremely well. Solar power has proven to be highly reliable on fixed structures. Solar power installations on buoys have experienced some localized problems with bird guano, but overall have proved equal to or better than previous equipment.

SENATOR LAUTENBERG: Last year your estimated unobligated balance for the end of fiscal year 1986 was $4,745,000. However, the actual fiscal year 1986 unobligated balance was $10,394,000. What was the reason for this slippage of more than $5.6 million?

ANSWER: The primary slippages were in the patrol boat replacement project ($4,000,000), delayed in review and approval, and the shipboard sensors project ($1,000,000), which was redirected late in the fiscal year.

SENATOR LAUTENBERG: You are requesting $300,000 to continue research on the Global Positioning System (GPS). Research on GPS has been going on within the Department of Transportation, FAA, and/or Coast Guard for about 10 years. What are the major problems with GPS, and when do you expect that you will be able to replace Loran-C with GPS?

ANSWER: The major immediate problem with GPS is that it is not yet an operational system and won't become so until 1990 with the current satellite launch schedule. In the longer view, the 100-meter accuracy provided by civil GPS will not meet all the accuracy requirements identified for civil use in the Federal Radionavigation Plan. Coast Guard research and development activities focus on verifying and improving the performance of GPS for maritime navigation. There is particular emphasis on the harbor and harbor approach phase of marine navigation and on applications where the high repeatable accuracy of Loran-C is currently used, but which civil GPS will not provide. In this regard, our major effort is to verify the differential GPS concept to provide enhanced civil GPS accuracy, including development of data format standards for differential GPS.

A definite date for the replacement of Loran-C with GPS awaits a Department of Transportation decision on the future mix of radionavigation systems. This decision will involve a determination whether or not GPS meets civil air, marine, and terrestrial needs provided by current systems at a cost economically acceptable to civil users. However, the Coast Guard believes that with the delay in implementation of GPS and with the growth of the Loran-C user community beyond maritime interests which is currently underway, we will need to operate the continental U.S. Loran-C system until at least 2015.

SENATOR LAUTENBERG: You are requesting $400,000 for commercial vessel fire protection research to support your regulatory mission. Last year it was indicated that 11 of your Fiscal Year 1986 projects and 9 of your proposed Fiscal Year 1987 projects could support regulatory improvements.

What Fire Protection Regulations have you issued or modified during the past year as a result of this research?

ANSWER: Our major Fire Protection Regulation rewrite, which will result in an entirely new Fire Protection Subchapter (K) Title 46 Code of Federal Regulations, is still in progress. An Advance Notice of Proposed Rulemaking was published in the October 1984 Federal Register. We expect to publish an Notice of Proposed Rulemaking later this year. Also, we have made significant initiatives at the International Maritime Organization's Maritime Safety Committee and Subcommittee on Fire Protection in the following areas:

-Development of a test method for surface flammability of bulkheads, wall and ceiling linings, and floor coverings.

-Standards for devices to prevent the passage of flame into cargo tanks.

-Materials other than steel for pipes.

-Fire protection systems for passenger ship safety.

SENATOR LAUTENBERG: Would you update for the record the status of your research involving hazardous chemical personnel protection?

ANSWER: We have completed development of a chemical response suit using an innovative teflon/nomex material. Testing of suit material and suit components (cooling garment, gloves, communications equipment, etc.) continues. Field testing and evaluation of the chemical monitor is nearly finished. An interagency work group (Environmental Protection Agency, National Institute for Occupational Safety and Health, Federal Emergency Management Agency, Occupational Safety and Health Administration, and Coast Guard) has been established to coordinate federal research on chemical protective clothing. The Coast Guard and the Environmental Protection Agency completed a joint project to develop guidelines on selection and use of chemical protective clothing.

SENATOR LAUTENBERG: You indicate that you intend to award a contract to develop and install a forward looking infrared (FLIR) system for your medium endurance cutters. What is the status of this contract and what is the estimated total cost of the development of the system?

ANSWER: The technical specification for the system has been prepared and preparatory work continues for compiling the contract package. Because of the personnel reductions and reorganization of the Headquarters research and development staff, project management has been transferred to the Research and Development Center. This has delayed the award of the contract to FY1989. The total estimated cost for the project is $3,500,000.

SENATOR LAUTENBERG: You are requesting $200,000 to develop personnel program benefit/cost measures and workforce planning models. Can you tell us what kinds of measures and models you intend to develop and how they might be used to improve your operating efficiency.

ANSWER: The $300,000 requested in fiscal year 1988 will partially fund a pending $3 million development project.

This project plans to utilize proven DOD models for dynamic measures of: Coast Guard force readiness; critical operational skills in place versus what is needed; productivity; costs and member/family impacts of various pay and benefit options; and better budgeting of payroll based on improved workforce projections. It will also analyze recruiting and manpower planning options for the "baby-bust" era looming in the mid-1990's.

SENATOR LAUTENBERG: What kind of staffing model do you use now?

ANSWER: We currently use an enlisted work force flow model based on an obsolete, 10 year old Navy model. The model projects annual force structures by specialty given estimates of accessions, training, advancements, aging, attrition, and retirement. Projected force structures are provided for a five-year planning horizon, and are useful in long-range issues such as staffing at training commands, gross numbers of needed recruits, and advancement estimates. It is suitable for annual planning only and provides no force-costing data for budget planning.

We have tried to use more comprehensive and detailed DOD models directly, but with little success as they operate with different policy assumptions and larger enlisted rating populations. With the funding requested in fiscal year 1988, we will begin adapting them for Coast Guard use.

SENATOR LAUTENBERG: Last year, it was indicated that fiscal year 1987 would be the final year RDT&E funding would be requested for your Patrol Boat Replacement Program. This year an additional $600,000 is requested. Why has this program slipped?

ANSWER: The Developmental Track of the WPB Capability Replacement Acquisition project shared benefits derived from other Coast Guard research efforts in marine vehicle technology. The realignment of the Coast Guard's research and development organization and simultaneous refocusing of this portion of the WPB project shifted additional funding requirements to the early stages of this track. This was done to more quickly narrow the choice of competing concepts and achieve significant reductions in outyear AC&I funding requirements.

SENATOR LAUTENBERG: Would you list for the record your major in-house research projects?

ANSWER: The major in-house research projects in FY 1987 are:

Chemical Protective Suit Materials;

Hazardous Chemical Analysis for Pollution Response and Law Enforcement;

Marine fire and safety research;

Marine Vehicle Technology Program, including development of a multi-unit law enforcement model, an Aids to Navigation model, baseline tests on the current buoytender fleet, and technology surveys, utilization studies and seakeeping assessments in support of the Buoytender (WLB/WLM) Acquisition;

Automated Aid-to-Navigation Positioning System;

Loran-C Signal Analysis;

Global Positioning System for Civil Marine Radio Navigation;

Energy Management for Remote Lighthouses;

Electronic Navigational Chart Development;

Aid-to-Navigation Signal Effectiveness;

Improvement of Probability of Detection in Search and Rescue;

Forward Looking Infrared Radar Evaluation in Maritime Environment;

Automation of Search and Rescue and Enforcement of Laws and Treaties Operational Information Needs;

Voice Broadcast Automation; and

Distributed Information System for the Ninth Coast Guard District

SENATOR LAUTENBERG: Would you indicate for the record the boards and committees you help to support?

ANSWER: The boards and committees that receive funding support from the RDT&E appropriation are:

National Academy of Sciences Marine Board
Ship Structure Committee
EPA Oil and Hazardous Materials Simulated
    Environmental Test Tank Interagency Technical
    Committee for Spill Countermeasures and Cleanup
    Equipment Test and Evaluation
Advisory Board to Dartmouth College, Thayer School
    of Engineering Ice Research Laboratory

OFFSHORE OIL POLLUTION COMPENSATION FUND

SENATOR LAUTENBERG: No funds are requested for your Offshore Oil Pollution Compensation Fund. Have you had to cleanup any Outer Continental Shelf spills to date?

ANSWER: Although there have been approximately 7700 offshore spills resulting from Outer Continental Shelf crude oil exploration, development, production and transportation activities since Fund establishment in 1979, none have required Federal cleanup and removal costs, or third party damage claims settlements from the Fund. The reason is that the majority of spills which occurred were of such small volumes that no spiller or Federal response action, other than reporting and evaluating the spill, was necessary. In those few instances where cleanup was necessary, the spiller, or his insurer, promptly responded, assuming appropriately prescribed statutory liability.

SENATOR LAUTENBERG: You are proposing authority to transfer $2,154,000 from this program to cover fiscal year 1987 supplemental costs in other programs. Do you believe you have sufficient obligational authority under this program to meet any contingencies in fiscal years 1987 and 1988?

ANSWER: The available Fund balance after the transfer should more than cover any fiscal year 1987/1988 contingencies.

DEEPWATER PORT LIABILITY FUND

SENATOR LAUTENBERG: You are not requesting any appropriation for the Deepwater Port Liability Fund. Have you obligated any money for oil cleanup costs from this Fund?

ANSWER: Since establishment of this Fund in 1981, we have not had to obligate any money for oil cleanup costs, nor for third party damages. There have been no significant oil pollution incidents at our only U.S. deepwater port, the Louisiana Offshore Oil Port facility off Grand Isle, LA.

SENATOR LAUTENBERG: You are also proposing to transfer $5,176,000 from this program in fiscal year 1987 to meet other supplemental appropriation needs. Can this transfer be made without having an adverse impact on this Fund in fiscal years 1987 and 1988?.

ANSWER: Considering that no funds have been required to date for pollution cleanup, we can transfer $5,176,000 from this program in fiscal year 1987 without adversely impacting our Federal response posture in either fiscal year 1987 or 1988.

BOAT SAFETY

SENATOR LAUTENBERG: You are requesting $15,000,000 for your boat safety program. What is the basis for this request, and what impact do you feel the $15 million reduction from fiscal year 1987 will have on boat safety?

ANSWER: The request is for an additional $15 million which would offset a greater portion of the Coast Guard's cost of recreational boating services. The amount that we contribute for those services is over $200 million at this time. The safety impact which is measured by the combined expenditure of federal grant funding and state funds for boating safety has been increasing over the years. We hope that this trend will continue and that there would be no safety impact caused by the reduction of State Boating Safety funding.

SENATOR LAUTENBERG: For what purposes do the States use this money?

ANSWER: States spend boat safety grant funds to increase and improve their law enforcement, education, search and rescue, accident investigation and boat numbering and titling efforts, and to acquire, construct and repair public access sites.

SENATOR LAUTENBERG: To what extent would the States reduce their boat safety enforcement if this program were to be reduced or eliminated?

ANSWER: If the Federal funds stopped, State programs that do not have dedicated State revenue earmarked for boating safety would be seriously jeopardized. States with dedicated funds would probably experience a considerable reduction. State revenue would likely be shifted to programs that compete for Federal matching amounts.

SENATOR LAUTENBERG: With the total balance available for appropriation in the aquatic resources trust fund of $406.7 million, why aren't you proposing that a larger share of the trust fund be used to support Coast Guard's operating expenses?

ANSWER: Funds in the aquatic resources trust fund are allocated to the states and the Coast Guard, and remaining balances to the Department of Interior. The fuel tax paid for boat fuel is paid by recreational boaters, sport fishermen, and hunters, among others. A decision would have to be made by the Administration to request authorizing legislation to change the mix between the federal share (Coast Guard, Department of Interior) and the state matching fund share for boating safety versus fishery stocking. The aquatic resources trust fund is up for reauthorization this year, and this entire issue is being reviewed by our Authorization Subcommittee.

QUESTIONS SUBMITTED BY SENATOR COCHRAN

SENATOR COCHRAN: Referring to the Coast Guard letter of 5/7/86 it appears that the Coast Guard determined that the Hannibal Railroad Bridge constituted an obstruction to navigation based on a 1979 case report. However, it was not found to be an "unreasonable" obstruction because bridge repairs related to commercial tow damage were only $227,906 from 1969 until 1977. Assuming the estimated cost of $12,000,000 for the replacement section and that the company has spent $4,385,000 from 1982 through 1985 isn't it apparent that the cost benefit problem has been solved?

ANSWER: No. The money the company has spent was to provide heavier steel to all spans except the movable, or navigable span, and to provide better resistance to collision for those spans. Truman-Hobbs only considers the obstructiveness of the navigable span. Damage, repair, or betterment costs for other spans, unrelated to the obstructiveness of the navigable span, are the bridge owner's responsibility and are not considered in the Truman-Hobbs investigation.

SENATOR COCHRAN: In the Coast Guard letter of 2/24/82 it was indicated that while the Hannibal Bridge was considered obstructive, further investigation was being held in abeyance because of a reduction in Truman-Hobbs funding. In the Coast Guard letter of 11/27/84 it was indicated that the investigation was continuing. How much longer will it take?

ANSWER: There was a period from 1982 to 1984 when no investigations were conducted due to reduced personnel and budgetary constraints. Bridges are now being considered and investigated as the workload permits. The Second Coast Guard District Office is involved in several investigations at the present time and plans to reopen the Hannibal Bridge case by August 1987. It expects to have the Hannibal Bridge investigation completed by May 1988.

SENATOR COCHRAN: Isn't the question of whether or not Federal Funds are available for participation under Truman-Hobbs irrelevant in determining whether this or any other bridge constitutes an unreasonable obstruction to navigation?

ANSWER: Yes. Bridge alterations are funded individually when the bridges are found to be obstructive. The funding referred to was Coast Guard funding that was available to carry out investigations.

SENATOR COCHRAN: I understand that the Coast Guard and the Corps of Engineers have reached a tentative agreement to transfer the Truman-Hobbs responsibilities back to the Corps. Is this correct? If so, when can we expect legislation to be sent up?

ANSWER: Agreement has not been reached yet. If the Corps of Engineers and the Department of the Army agree to accept the Bridge Administration program (permits, regulations and Truman-Hobbs), legislation is expected to be forwarded by June 1987.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

PERSONNEL VS CAPITAL

SENATOR D'AMATO: The Administration and Congress have embarked on a major capital rebuilding effort for the Coast Guard. Aircraft and vessels procured in previous appropriations are now coming on line. Yet Coast Guard workyears are essentially frozen from last year. How can the Coast Guard man the new assets at previous personnel level? What is your long term plan to deal with the personnel side of the capital buildup? Do you see a 2,000-billet shortfall over the next several years?

ANSWER. New capital acquisitions and new missions which are fostering the requirements for more billets and FTE are:

a. WHEC post FRAM crewing
b. WMEC 270' acquisition
c. WPB 110' program
d. Drug Omnibus/Air Interdiction program
e. C-130 program
f. Rescue Swimmer program
g. Vessel logistics program
h. Underground storage tank program
i. Port Security
j. Maritime Defense Zone requirements
k. Acquistion Construction & Improvement billets

We have taken the initiative in a number of areas to get the required FTE and personnel. Internal realignment of support and maintenance functions has freed approximately 500 billets to be used for operational activities. Combined with other A-76 initiatives, and our requests in the FY 1988 and FY 1989 budgets we expect to meet the new committments.

BUDGET IMPACT

SENATOR D'AMATO: As you are probably aware, Congress will struggle with the budget resolution over the next several weeks. We will be fortunate if the total spending for transportation is merely frozen, rather that cut from last year. In the event your funding level is frozen, please outline your contingency plans, especially as regards the drug effort.

ANSWER: While detailed contingency plans have not yet been prepared, the Coast Guard has developed considerable expertise at developing the actions necessary to accomplish a reduction of this magnitude. A freeze at FY 1987 appropriations levels would effect an approximately $165M reduction in operating expenses. Since full personnel salary recovery costs cannot be achieved the first year of a reduction due to outprocessing costs, the cut would by necessity include significant personnel. As an operating agency with people crewing the facilities the end result of a major OE reduction leads inevitably to the laying up of multi-mission stations, cutters, and aircraft and reduction in associated people. An effort would be made to "share the wealth" across across facilities such that while overall Coast Guard operations were significantly reduced, no one program would be crippled. A representative table of reductions includes:

ITEM	SAVINGS (in millions)
Laying-up the older High Endurance and Medium Endurance Cutters, older Buoy Tenders, Patrol Boats and specialty vessels.	$ 65
Discontinue all "new starts" in the FY 1988 budget request, including crewing cutters and all budget category 3-7 items, (including three Medium Endurance Cutters)	$ 50
Mothball several long range search aircraft, some medium range search aircraft, some helicopters	$ 37
Close selected SAR stations, Marine Safety Offices and other shore commands	$ 11

Note: All figures are approximate projections

Since most of our operating facilities spend a majority of their operational hours...boat, cutter and aircraft patrols...on SAR and Drug Law Enforcement a significant reduction in both these missions would occur if such reductions were taken.

DRUG LEVEL OF EFFORT

SENATOR D'AMATO: For the past several years the Congress has put in the law a floor on the portion of the operating expenses account dedicated to drug enforcement. Again this year, the budget proposes to delete this figure from the bill. Is drug enforcement a top priority? Why not include a floor on your spending?

ANSWER: Yes, drug enforcement is a top priority of ours. Through various mandates, including the Anti-Drug Abuse Act of 1986, Congress has clearly indicated that it expects the Coast Guard to make drug enforcement a tip priority. The Coast Guard's actions to combat drug smuggling are consistent with the importance placed on this national problem by the Congress and the Administration.

Placing a floor on drug enforcement spending is an undesired step that unnecessarily complicates budgeting in a complex multi-mission agency such as the Coast Guard, An arbitrary spending floor on one mission could hamper our ability to manage these multi-mission resources in the most efficient manner.

In any case, since drug law enforcement is such a high priority mission within the Coast Guard, expenditures in this area have always exceeded previously established floors.

SENATOR D'AMATO: What will be spent on drug interdiction in FY 87, and what is requested as part of your FY 88 $2 billion operations account? Are you expecting steady growth, and if so, what return can we expect on that investment? In other words, to what extent will drug smuggling be deterred by Coast Guard efforts?

ANSWER: In FY 87, $431,804,000 will be spent on drug interdiction. In FY 88, $447,102,000 will be spent on drug interdiction.

As new assets authorized by the Anti-Drug Abuse Act of 1986 begin to come on line, the amount spent on drug interdiction should gradually increase. Whether the number of seizures will increase, decrease or remain constant is difficult to predict. If any one of the above scenarios result, an argument can be made showing the success of our program, i.e. increased seizures are a result of more/newer equipment; decreased seizures a result of our forcing smugglers to other methods of operations. But the overall success of our operations will definitely affect the drug smuggler in a more aggressive manner than ever before. Seizures should remain steady. This is due to a combination of higher eradication in Colombia, maritime route denial during special operations and significant seizures and destruction of marijuana stockpiles ashore by Colombians during special operations. The success of our interdiction efforts has caused drug smugglers to change their modes of operation. They have increased cocaine shipments, begun to use Mexico as a transshipment area, reduced their level of maritime smuggling, shifted to air shipments and continued the use of hidden compartments necessitating smaller loads. The prices of cocaine and marijuana have also increased reflecting both the availability of the drugs and the increased overhead for contraband traffickers.

MILITARY RESOURCES

SENATOR D'AMATO: Last July I co-chaired a special defense oversight hearing on the military's role in drug interdiciton. It was clear to Senators in attendance that there had been delays in release of FY 86 funds appropriated to the Navy, for Coast Guard operations. Has the situation been improved? When specifically, was the FY 87 Navy appropriation made available to the Coast Guard? How are those funds being targetted to drug interdiction?

ANSWER: Navy response with regard to the Coastal Defense Augmentation Account (CDAA) has been outstanding in all project areas. There has been significant progress in all FY 1986 CDAA projects with contracts in place and/or funds obligated. The status of both FY 1986 and FY 1987 CDAA is as follows:

SUMMARY OF FY 1986 AND 1987 CDAA
($000)

PROJECT	FY 1986	FY 1987	STATUS
MRR Replacement	$105,635	$116,000	Contract awarded
C-130 Aircraft	54,000	--	Contract awarded
C-130 FLAR	44,500	9,100	Contract awarded
WPB 110-ft	112,000	--	Contract awarded
180-ft WLB SLEP	14,100	--	Funds obliaged by end FY 1987
Transfer to AC&I	21,250	--	Allocated to 378 WHEC FRAM and 210 WMEC MMA
MK92 Fire Control System	12,000	--	Award expected by 4th qtr FY 1987
G-R-H Sequester	11,515	--	
Air Interdiciton Sensors		29,700	Contract awarded
WPB Replacement Prototype		18,000	Award pends
Aerostat	--	23,000	Award expected by 3rd qtr FY 1987

MK75 Ordnance Repair Facility	--	1,200	Scope/design under development
Deployable Port Security Boats	--	3,000	Award expected by 4th qtr FY 1987
	$375,000	$200,000	

- Funding for additional capital assets is planned within outyear Acquisition, Construction and Improvement (AC&I) budget requests.

SENATOR D'AMATO: On the capital side, I realize the Congress allowed discretion regarding assets to be funded using the $200 million appropriated in the continuing resolution. However, I understand that agreement was reached earlier this year on the mix of helicopters, vessels and communications support. Please outline how quickly these assets will be in the Coast Guard inventory, where they will be deployed, and their pay-off in the drug war?

ANSWER: Congressional guidance concerning both the FY 1986 and FY 1987 Coastal Defense Augmentation Account (CDAA) emphasized the acquisition of "defense-related equipment" to augment existing assets which would be needed in meeting the wartime mission of the Coast Guard. The FY 1987 CDAA program has been configured consistent with this direction. However, several of the acquisition initiatives have direct "drug war" impact. An outline of the FY 1987 program is as follows:

Medium Range Recovery Helicopter (10)...... $116,000,000

This acquisition represents the second phase of a multi-year replacement program for the Coast Guard's Medium Range Recovery (MRR) helicopter fleet. Under the terms of the existing contract these helicopters will be n the inventory by mid 1992. They will be deployed throughout the country at Coast Guard Air Stations. These systems have surveillance and range capabilities that will contribute significantly to the drug interdiction effort.

Patrol Boat (WPB) Replacement Prototype (2).$ 18,000,000

Two Coast Guard designed patrol boat prototypes will be constructed as part of a fleet-wide replacement program. The two systems will allow engineering and operation evaluations that will serve as the foundation for future production decisions. The prototypes are expected to be available for evaluation by the end of FY 1989. The new design promises enhanced fleet-wide capability in several mission areas including drug interdiction. As our patrol boats are the primary "arrival zone" drug interdiction assets, patrol boats are critical resources for the Coast Guard's overall "drug war" effort. Deployment decisions pend completion of the evaluation phase of the program.

Air Interdiction Sensors (4)................$ 29,700,000

Four HU-25A fixed wing aircraft will be modified to an interceptor configuration (intercept radar and identification sensor) for use in the interdiction of airborne drug smugglers. This initiative provides a much needed capability to safely intercept, classify and track potential drug traffickers. The system will be deployed in the Southeast U.S. in conjunction wit E-2C surveillance aircraft deployments. The four systems will be in the inventory by the end of FY 1988.

Aerostats (3).............................	$ 23,000,000

This acquisition will continue a multi-year procurement of Sea Based Aerostats (SBA). Additional and improved SBAs will allow around the clock surveillance of major drug interdiction routes in the Caribbean throughout the year, a capability beyond that of existing resources. Under an existing contract these systems are expected to be in the inventory by the end of FY 1988.

~~C-130 For~~ward Looking Radar (FLAR)...........	$ 9,100,000

This funding continues a multi-year program to procure and install surface search radars in HC-130 aircraft. The systems will be deployed at six C-130 sites throughout the country and will enhance surface surveillance for several missions including law enforcement. The initial system will be delivered and installed by the fourth quarter FY 1988, the final system by the first quarter FY 1991.

MK-75 Ordnance Repair Facility..............	$ 1,200,000

Funding of the MK-75 Ordnance Repair Facility within the CDAA is considered particularly appropriate given its obvious defense related impact. The project will provide repair facilities at the Coast Guard Yard in Curtis Bay, Maryland for new MK-75 ordnance systems (25) being installed on 378 ft WHEC and 270 ft WMEC cutters. Establishment of the new facility will maintain critically needed gun repair expertise within the Coast Guard and assist the Navy's single repair facility in meeting added maintenance and repair workload generated by the new Coast Guard guns. The facility will be constructed during late FY 1988/early FY 1989.

Deployable Port Security Boats.............	$ 3,000,000

The Coast Guard is tasked by the Joints Chiefs of Staff to provide port security forces overseas with the necessary equipment to conduct operations in a deployed hostile environment. The Coast Guard is unable to meet these requirements because of a lack of specialized equipment. This project will provide that equipment for overseas deployment. The boats will be in the inventory by the fourth quarter FY 1988.

SENATOR D'AMATO: Provide a status report on the establishment of a Bahamian marine base, funded as part of the Drug Act contained in the FY 87 continuing resolution.

ANSWER: The Anti-Drug Abuse Act of 1986 appropriated $5 million for construction of a docking facility in the Bahamas to facilitate Coast Guard and Royal Bahamian Defense Force drug interdiction operations in and through the Bahama Islands. The act also included a requirement to "establish a repair, maintenance and boat lift facility to provide repair and maintenance services for both Coast Guard and Bahamian marine drug interdiction equipment, vessels and related assets." To satisfy this requirement, the Coast Guard is proceeding to establish a Boat Lift facility at Coral Harbor, New Providence and a Drug Interdiction and Docking Facility (DIDFAC) at the inactive U.S. Navy facility at Georgetown.

A marine travel lift has already been purchased for the Boat Lift facility, and a Commerce Business Daily notice has been published regarding construction of the associated finger piers and ramp space. The initial design, a concept of operations and preliminary site surveys for the DIDFAC have been prepared. The Coast Guard has requested the Department of State to schedule a briefing with appropriate Bahamian Government officials to discuss Coast Guard plans for these two facilities.

The Coast Guard has worked closely with the Department of State to ensure the proper completion of both these facilities.

REORGANIZATION

SENATOR D'AMATO: Earlier this year, you announced a realignment of maintenance and logistics. Instead of having 12 separate district staffs for maintenance and support, new Maintenance and Logistics Commands were established for the East and West Coasts. At the same time, the New York and Alameda District Offices will be closed. What is the impact of this reorganization, both in terms of dollars and positions, as well as operational effectiveness? In particular, what is the New York impact?

ANSWER: This reorganization has freed up about 500 billets which were performing support functions for reallocation to priority operational requirements. We estimate the transition will cost about $10M on a non-recurring basis. However, we see a long term, recurring cost avoidance of $15M annually attributable to personnel reallocations. Further, this reorganization should provide better maintenance and logistics support at a lower overall cost.

In New York, as a result of realignment, 9 military and 105 civilian positions are established above the current staffing levels.

There will be no reduction or change in Coast Guard service to the public as a result of realignment.

GOVERNORS ISLAND

SENATOR D'AMATO: Governors Island had been Headquarters for the Atlantic Area Commander, the Third District Commander, and the Atlantic Maritime Defense Zone. Which functions remain? To what extent have the staffs been integrated? Are any Drug Task Forces headquartered at Governors Island? How many billets are currently assigned to Governors Island?

ANSWER: The Atlantic Area Commander and the Atlantic Maritime Defense Zone remain on Governors Island. The Third District office is being disestablished. Its operational management functions are being assumed by the First and Fifth Coast Guard District offices in Boston, Massachusetts and Portsmouth, Virginia respectively.

There is no specialized Drug Task Force headquartered at Governors Island. However, Group New York, Station New York, and the cutters which operate in the local area all have drug law enforcement as a primary mission. These units have an on-going working relationship with state and local law enforcement agencies, and have participated in several multi-agency drug interdiction operations.

There are 1,061 military billets and 551 civilian positions currently assigned to units on Governors Island. This includes the Atlantic Area and Maritime Defense Zone staffs, the Third Coast Guard District Office staff, Support Center New York, Training Center New York, Group/Captain of the Port New York, Station New York, Vessel Traffic Service New York, and Aids to Navigation Team New York. In addition to these shore based commands, There are 8 Coast Guard cutters homeported at Governors Island, with a total of 288 military personnel assigned.

PROCUREMENT

SENATOR D'AMATO: This Committee has been critical of the Coast Guard's procurement process. It has been, frankly, slow and inefficient. Several areas were to be improved: --Upgrading the calibre of procurement personnel --better cooperation with the Office of the Secretary --streamline those procurements of DOD acquired equipment. How have each of these areas been improved?

ANSWER: Substantial progress to improve each of these areas has been made. A Coast Guard initiated update to the 1986 GAO report on "Coast Guard Acquisition, Status, and Reform" (GAO/RECD-86-161BR) is presently in the process of being submitted by the Secretary to Congress. This follow-up report details the significant progress that has been made in improving the acquisition function since the 1986 GAO report.

SENATOR D'AMATO: Specifically, on the Medium Range Recovery (MRR) Helicopters, will DOD not just acquire the Airframe, but also provide spare parts, and assist with maintenance -- or will we see the kinds of problems Coast Guard had with the Falcon Jets and Dolphin Helicopters?

ANSWER: No. We do not anticipate similar problems. We plan to utilize the DOD infrastructure for support at all levels. Approximately 95% of the parts used on the MMR (the HH-60J helicopter) are DOD supported. The remaining 5% of parts peculiar to the Coast Guard exist in the Coast Guard inventory.

SENSOR SYSTEMS

SENATOR D'AMATO: In April 1985 the Deputy Secretary of Transportation authorized the Coast Guard to exercise its option to purchase an additional five AIREYE sensor systems for installation in HU-25A surveillance aircraft. Did the Coast Guard exercise the option? If so, what is the status of the five additional AIREYEs?

ANSWER: The Coast Guard exercised the option for five production AIREYE systems on 25 April 1985. Production is on schedule. The first two systems have been accepted and are installed in HU-25A aircraft. The remaining three systems will be accepted and installed by October 1987.

SENATOR D'AMATO: The above mentioned authorization was based on the condition that the Coast Guard would accelerate its efforts to acquire Active-Gated TV (AGTV) sensors so that they could be integrated into the AIREYEs as soon as possible. The AGTV is important because it is the only sensor that can provide nighttime target identification both in the air and on the sea. Why hasn't the Coast Guard contracted for any AGTV sensors since that time—over 20 months ago? What is your current schedule for acquisition of AGTVs?

ANSWER: The Coast Guard has been conducting operational evaluations of the proof-of-concept prototype Active Gated Television (AGTV) in the South Florida area. In order to provide identification capability for small, darkened vessels, AGTV needed to be upgraded with a higher magnification lens and a more powerful laser. The first successful tests against smaller vessels were conducted in October 1986. Tests with aircraft targets were conducted in November 1986. Based on these tests, we are proceeding with the production AGTV acquisition. The AGTV acquisition schedule is as follows:

MILESTONE	DATE
Receive TSARC AP Update approval	September 1987
Issue RFP for production AGTV	November 1987
Production AGTV contract award	September 1988
First Article delivered for testing	March 1990
First Article testing complete	September 1990
Award production option	September 1990
AGTV unit #1 delivered (after refurbishing)	November 1990
AGTV unit #2-#6 delivered	Nov 1991 - Jan 1992

SENATOR D'AMATO: Early implementation of the Coast Guard's Air Interceptor Program is critical to the success of the overall Coast Guard Air Interdiction effort. Please provide the following information on this program. How long will it be before the program is under contract?

ANSWER: The acquisition of sensors/modifications for the HU-25A interceptor program was transferred to the Air Force through a Military Interdepartmental Procurement Request (MIPR) on March 25, 1987.

SENATOR D'AMATO: How many HU-25A's do you plan to equip as interceptors?

ANSWER: The Coast Guard plans to equip eight HU-25A's as interceptors.

SENATOR D'AMATO: What Air-To-Air Radar will be used?

ANSWER: The APG-66 radar used by the Air Force, Navy and Customs Service will be used for the U-25A interceptor program.

SENATOR D'AMATO: Does the Coast Guard intend to modify the AIREYE Aircraft as interceptors, incorporating the Air-To-Air Radar and AGTV?

ANSWER: No. AIREYE is a complex system which was originally designed for the Marine Environmental Protection (MEP) mission. The prototype AGTV sensor was integrated to the AIREYE system for nighttime surface target identification. The prototype AIREYE system, which has been operational on the HU-25A aircraft at CGAS Miami, has demonstrated its capability for MEP, surface maritime law enforcement, and for search and rescue. The multi-mission capability of AIREYE provides dedicated surveillance resources against the threat of drug smuggling by vessels in the surface maritime region.

Improvements have been identified for the concept prototype AGTV system. Contracting efforts are underway for six operational systems. The first operational system will be available in November 1990.

The specially configured HU-25A interceptors must be dedicated primarily to interceptor duties and will require a much simpler integration system.

SENATOR D'AMATO: What is your current schedule for operational deployment?

ANSWER: We plan to have the first HU-25A interceptor sensor equipped in April 1988.

SENATOR D'AMATO: Please provide a status report on the competition for HU-25A interdiction sensors, funded at $27.9 million from FY 1987 Coastal Defense Appropriations. As DOD embarks on this procurement, will consideration be given to offerrors capable of equipping HU-25A aircraft with surveillance sensors?

ANSWER: The responsibility for the HU-25A interceptor modification was transferred to the Air Force through a Military Interdepartmental Procurement Request (MIPR) on 25 March 1987 for the funds authorized for this program. Responsible for modifying the HU-25A with the appropriate sensors, the Air Force will use authorized procurement procedures and/or facilities to perform the modifications as quickly as possible in order to meet our urgent requirement.

SUBCOMMITTEE RECESS

Senator LAUTENBERG. Was there something else that you wanted to add?

Admiral YOST. I would just like to add that I have been in front of this committee several times in other capacities, and I have never heard the support for the Coast Guard that I have heard today, both from the majority and the minority side.

I leave here somewhat relieved, although I know we have a major budget problem that you and the minority side will be dealing with and I feel very good about the things that have been said here today. We are going to need that support to continue our drug interdiction, as well as our other major missions.

Senator LAUTENBERG. Thank you for those comments. We will try to make good on our intentions. Thank you. That adjourns this hearing. Our next hearing is scheduled for Thursday, April 30, on the Washington Metropolitan Transit Authority. Thank you all for being here.

[Whereupon at 11:32 a.m., Thursday, April 23, the subcommittee was recessed, to reconvene at 10 a.m., April 30.]

DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1988

THURSDAY, APRIL 30, 1987

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:10 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Frank R. Lautenberg (chairman) presiding.

Present: Senators Lautenberg, Harkin, and Mikulski.

DEPARTMENT OF TRANSPORTATION

URBAN MASS TRANSPORTATION ADMINISTRATION

STATEMENT OF RALPH L. STANLEY, ADMINISTRATOR

ACCOMPANIED BY:

- **ALFRED A. DELLIBOVI, DEPUTY ADMINISTRATOR**
- **JOSEPH A. LASALA, CHIEF COUNSEL**
- **KENNETH W. BUTLER, ASSOCIATE ADMINISTRATOR FOR BUDGET AND POLICY**
- **ROBERT H. McMANUS, ASSOCIATE ADMINISTRATOR FOR GRANTS MANAGEMENT**
- **A.M. YEN, ASSOCIATE ADMINISTRATOR FOR TECHNICAL ASSISTANCE**

OPENING REMARKS

Senator LAUTENBERG. I call the meeting of the Subcommittee on Transportation to order. I apologize for not starting precisely on time, although I think it is fair to say that this is usually by Senate standards considered ahead of time.

I come from the business world, we operate on the same clock as everybody else does. It pains me to be late. So I apologize, but welcome you here.

Today the subcommittee is going to be hearing two witnesses. Appearing first to explain and support the administration's policy on mass transit will be the Administrator of the Urban Mass Transportation Administration, Mr. Ralph Stanley.

There are a number of issues that will be explored, including the implementation of the recently enacted surface transportation reauthorization, the administration's efforts in the area of privatization or contracting-out, the workings of the project management oversight process [PMO], and UMTA's responsibility for ensuring transit safety.

I also will be following up with Mr. Stanley on a couple of projects near and dear to me, the Hudson River development effort and the trans-Hudson River crossings. As someone who has spent some time in New Jersey, Mr. Stanley, I am sure you will agree how important mass transit and efficient movement of people is to our state and how critical mass transit is for relieving congestion in and around the state's cities and the airports.

Following Mr. Stanley's defense and explanation of the administration's overall budget, he will be asked to remain as a witness to be joined by Mrs. Carmen Turner, the General Manager of the Washington Metropolitan Area Transit Authority [WMATA]. General Manager Turner is here to explain her request for increased funding for Metro's heavy rail construction program.

The two witnesses together hopefully will explain the difference in what each sees as the needed Metro funding level for 1988. I would like to add that I am particularly satisfied that the Senate overrode the President's veto of the surface transportation reauthorization bill.

I do not believe that the investments in our nation's cities can be terminated. The investments we make today will be paying dividends for years and years to come. Transit relies heavily on the dedicated users fees that are deposited in the transit trust fund. We must keep good faith with those who pay into the fund that those moneys will be used for the purposes intended to the maximum extent possible.

I am confident that with the representation on this subcommittee the transit needs of this country will not be ignored or shortchanged.

Before we hear from Mr. Stanley, I have a prepared statement from Senator D'Amato. Without objection, the statement will be inserted in the record.

[The statement follows:]

STATEMENT OF SENATOR D'AMATO

Mr. Chairman, I join you in welcoming today's witnesses, Ralph Stanley, Administrator of the Urban Mass Transportation Administration [UMTA], and Carmen Turner, General Manager of the Washington Metropolitan Area Transit Authority [Metro].

The administration has proposed a 60-percent cut in federal funding for mass transit. Only $1.5 billion, distributed by formula, is provided for gas tax funds—a cut of $2.5 billion from current levels. No discretionary funds are provided for rail modernization, bus projects, or new starts. The current formula program, funded with about $2 billion from general funds, is ended. No operating aid is available to cities over 200,000 in population. Under the current program, $850 million is available for operating aid for rural and urban areas.

No separate general funds are requested for interstate substitution-transit program. Instead, the administration proposes to fund both transit and highway substitution projects from the highway trust fund and both programs will be subject to the federal-aid highways obligation ceiling. Currently, $200 million in general funds are available just for transit projects. The administration requests $130 million for Washington Metro.

New York City loses almost $300 million under the administration plan. The federal funding source for the Westway substitute program is cut nearly in half. In addition, upstate cities suffer crippling operating and capital cuts.

I have been a consistent supporter of a strong federal public transit program. Year after year, I have opposed UMTA budget proposals crafted to do away with the long-standing federal commitment to transit. Each year, Congress disregards UMTA's proposal and tries to provide as much as it can to keep the nation's transit systems alive. We have just passed a 5-year highway-transit reauthorization bill that does not include programmatic changes to support the administration budget. For example, the separate gas tax discretionary capital program and the formula operating and capital program have been continued, as well as the separate transit and highway substitute programs.

UMTA and I do agree on the importance of good management of large transit capital projects. The highway-transit reauthorization bill includes a permanent authorization for the project management oversight program which was derived from legislation which I introduced, S. 1931.

Washington Metro has asked for an appropriation of $250 million for fiscal year 1988. This is an increase of $49 million above fiscal year 1987 appropriated levels at a time when this subcommittee is facing tight budget constraints. We need to provide funds for more air traffic controllers, and for adequate Coast Guard drug interdiction programs. It will be very difficult to accommodate any increases for Metro.

However, it is clear that something must be done to improve Metro's ability to provide cold weather service. Federal employees, as well as visitors and other members of the riding public must not again suffer serious service disruptions due to cold weather conditions. It is important for UMTA to assist Metro in this regard.

I thank you, Mr. Chairman, for this opportunity to make some comments. I look forward to hearing from our witnesses.

STATEMENT OF RALPH L. STANLEY

Senator LAUTENBERG. With that, Mr. Stanley, welcome again to you and your colleagues, and I invite you to introduce them and then to make your statement.

INTRODUCTION OF ASSOCIATES

Mr. STANLEY. Thank you, Mr. Chairman. I would like to introduce my colleagues at the table. Robert McManus, who is the head of our grants management office; Ken Butler, who is the head of our budget and policy office; Joe LaSala, our chief counsel; Al DelliBovi, Deputy Administrator of UMTA; and in addition, Tony Yen, who is now heading our research and technical assistance effort.

I know that the committee is pressed for time, but would appreciate if I could insert my prepared statement for the record and take a minute or two to make a couple of points. First, the problem of rising costs in transit continues, coupled with the likelihood, even with the passage of the recent authorization bill, of a reduced federal role for the foreseeable future.

That, however, in no way reduces the public's need for mobility. What is necessary and continues, I think, are new ways to finance and operate transit that involve partnerships at all levels of government and that involve both the public and private sectors of the industry.

Under the leadership at UMTA in the past several years, I believe the transit industry is responding. Sixty-seven percent of all the agencies that get assistance from UMTA have adopted a local private sector policy. Eighty-four percent of them have a process now in place for involving the private sector in the planning and delivery of service, and 51 percent are undertaking studies to increase private sector participation.

The reality in the past several years is that there are solid alternatives to continued high levels of federal funding for transit, and that competition from the private sector, as well as some of the innovative financing arrangements, are able to tap the resources available in the private sector.

Second, Mr. Chairman, I am pleased this morning to announce that we have initiated the Rural Transportation Assistance Program [RTAP], which was included in the recently passed highway transit authorization bill. That program will have two components, the first of which will distribute 85 percent of the funds through an annual allocation to the states for needed training and technical assistance in rural areas.

Since we are well into the fiscal year, this year's funds will remain available for obligation next year to give all the states time to develop a program and prepare an application.

The second component of the new program uses the remaining 15 percent to support a national effort to develop training and technical assistance materials for the use of states and local operators. These will be developed under a recently signed cooperative agreement with a consortium consisting of the American Public Works Association, Rural America, and the National Association for Transportation Alternatives. We believe this to be an ideal mix of expertise, which will strengthen the RTAP Program considerably.

TRANSIT DEVELOPMENT IN THE MEADOWLANDS

Last, Mr. Chairman, I would like to suggest that if you look at the positive future for transit, you only have to look at what is happening in our home state of New Jersey. Tailoring transit service in the future to meet the changing needs of the market is difficult. For example, there are now about 120,000 people who are at work in the Meadowlands.

This new urban village, which is now larger than downtown Detroit, has sprung up in only a few years and it has created mobility problems that are far too familiar in city after city across the country. Existing agencies often lack the flexibility to alter their service to meet this new need.

Highway and transit improvements are often programmed years in advance. And despite the passage of the recent legislation, funding shortages are frequently coupled with widespread increases in demand. I believe, however, that when the public sector works effectively with the private sector, the emerging needs of these urban villages can be met.

A wide variety of services can be provided by contract with public agencies, or at the initiative of private developers seeking to provide access to their projects. I believe New Jersey has taken the lead throughout the country in innovation in this area.

A developer has proposed providing funds for the Allied Junction transfer point in the Meadowlands, as a way of supporting his project and at the same time providing better mobility for commuters in New Jersey and in the New York area. The Hudson River transitway is one of the best examples in the country, in my view, of a public-private partnership with developers and public agencies.

The port authority's transit center, which recently started, is a true success story of a public agency working very closely with employers to improve transit. New Jersey was also one of the first states to create, through its private carrier advisory committee, a regular dialog between the private bus companies in the state and the state transit agency.

And finally, New Jersey Transit decided to contract-out 5 percent of its existing service and is making, in my belief, very good faith efforts to implement that program. In using the private sector as a tool of good government New Jersey is providing more and better transit service for its residents today, and is showing the rest of the country how to successfully deal with changing transit needs.

To further encourage this type of innovation, we will shortly be announcing an effort to provide preliminary engineering assistance to New Jersey Transit for projects at Montclair, Kearny, Secaucus transfer, and for the Penn Station access issue.

Thank you very much, Mr. Chairman. I would be glad to answer any questions that you might have at this time.

PREPARED STATEMENT

Senator LAUTENBERG. Thank you very much Mr. Stanley. Your prepared statement will be made part of the record.

[The statement follows:]

STATEMENT OF RALPH L. STANLEY

Mr. Chairman and members of the subcommittee, I would like to briefly explain the Administration's budget proposal for FY 1988 and the rationale behind that proposal. But even more, I would like to outline how I believe our budget request best reflects the current status of the transit industry and current national priorities.

The Administration is requesting $1.5 billion in budget authority for the Urban Mass Transportation Administration in FY 1988. This represents a substantial reduction from the current funding level of $3.5 billion. While the formula program in FY 1988 will be lower than the FY 1987 appropriation, formula capital assistance for urbanized areas remains virtually unchanged from the FY 87 level.

Our proposal would continue to provide capital assistance for replacement and rehabilitation projects, support existing transit capital improvement projects, and fund operating assistance for rural and urbanized areas with populations of less than 200,000. We would, however, eliminate operating assistance for larger urbanized areas, conclude the wasteful discretionary new starts program while honoring existing commitments, and terminate discretionary rail modernization in favor of funding through the capital formula program.

In evaluating our requested funding level, it might be useful for the Subcommittee to consider our proposal in the context of the annual cost of simply continuing existing transit service. Replacement of existing rolling stock, bus and railcars, would require an annual total of $920 million, including local match. At the proposed 50 percent Federal share, almost $1 billion would remain for other capital purposes, more than enough to cover assistance for bus maintenance facilities at current levels, and more than enough for any truly cost-effective rail modernization projects. In other words, a $1.5 billion funding level would permit a reasonable Federal program for all of the transit industry's routine needs.

It is also interesting to compare our requested funding level with the recently enacted surface transportation authorization. The basic capital funding levels of that authorization--that is, not including new starts, operating assistance, and with Interstate Funding moved to other sources--is a level close to that which we are proposing. That core level would provide a Federal Transit program which directly addresses and is adequate to meet the local mobility needs of our cities, including the existing formula capital level, operating assistance for small urban and rural areas, along with necessary rail modernization.

THE STATE OF MASS TRANSIT

Mr. Chairman, over the years, the Federal Government has made a substantial investment in public transportation. Since the start of the UMTA program in 1964, appropriations have totaled some $49 billion in public transit assistance. To date, UMTA has made available approximately $38 billion in capital assistance, and almost $11 billion in operating assistance.

These funds have purchased an imposing list of capital goods, beginning with 64,000 new buses. That has been enough to replace all overage buses, so that the average age of buses required for peak hour service is now less than 6 years. In addition, over 6,800 rail cars have been purchased. Over $12 billion has been spent on modernizing existing rail systems in 9 metropolitan areas. New systems have been opened in 11 cities at a cost of over $9 billion in Federal assistance.

In light of this trend, we think it is time for the Administration and the Congress to look closely, not only at overall spending for public transportation, but also at how well these resources have been expended. We need to go back to the basics.

Depite this massive capital commitment and the $11 billion in operating assistance to more than 300 cities, the industry has lost market share. According to U.S. Census data, in 1980 only 9 percent of all urban work trips were on transit, down from 13 percent in 1970. A further indication of transit's weak market share is the fact that it is used for only 4.75 percent of all urbanized area local travel, as reported in the 1983 Nationwide Personal Transportation Study.

Furthermore, costs have increased substantially. The unit cost of providing transit service has increased more than twice as fast as inflation since 1965. Real unit costs were 16 percent higher in 1984 than in 1980. Transit operating costs totaled about $2 billion in 1970; today they total over $10 billion. Operating subsidies were about $300 million in 1970; in 1985 they exceeded $6 billion. Research and experience indicate several reasons for the downward trend suffered by the transit industry.

- Labor Productivity. The number of vehicle miles per employee fell 10 percent between 1975 and 1980, and another 3 percent between 1980 and 1984, according to an UMTA analysis of APTA and Section 15 data.

- Absenteeism. Transit absenteeism has been found to be three times that of the national average. A recent Rice Center study indicates that reducing transit absenteeism to the service industry national average could save at least 15 percent of annual operating costs.

- Labor Compensation. A recent Urban Institute study covering 8 large cities shows that public sector bus drivers' total compensation averaged 31 percent higher than for unionized private sector bus drivers. In Chicago, for example, this figure is 34 percent. Chicago unionized public drivers earn about $41,900 per year, compared with $31,300 for unionized private drivers. Public agency unionized mechanics made 47 percent more than unionized private mechanics. (For the CTA, the figure is 40 percent.) These disparities are critical because labor compensation totals about 70 percent of the industry's operating expenses.

- Excess Vehicles. The transit industry nationally had an aggregate vehicle spare ratio of 32 percent, according to an UMTA analysis of the 1984 Section 15 data. This is the number of active vehicles in excess of those required for maximum scheduled service. That translates into one backup bus for every three buses on the road. A 32 percent spare ratio is well in excess of UMTA's 20 percent maximum guideline. In addition, the industry stores another 6,800 buses as inactive, nearly 2,000 of which should still be on the road since they are less than 12 years old. These 2,000 buses cost $300 million. In all, the industry owns almost 12,000 excess buses, which cost $1.8 billion.

Preliminary analysis of 1985 data indicate that excess buses remain a significant issue. Total fleet size has remained nearly the same, while peak service bus requirements have increased only slightly. The number of inactive buses under 12 years old appears to have increased slightly.

More difficult to quantify, but equally important in considering the decline in transit productivity, is the role of management. The evidence cited above strongly indicates that the efforts of transit management to improve productivity are not as strong as they might be, or should be considering the level of Federal investment. As I will discuss later, substantial savings are possible through improved management.

It should also be pointed out that those benefitting from the Federal investment in transit are not primarily the poor and transit dependent. A study by Charles River Associates of the share of Federal subsidy funds accruing to different income groups shows that in 1983 individuals from households below the poverty level of $10,000 annual household income received only 23 percent of the Federal transit operating subsidy. This translates into 12 cents in Federal subsidy per transit trip for poor riders, as compared to 20 cents per transit trip received by those with household income over $50,000. This means that 77 percent of Federal transit subsidy went to transit users who were not poor. This inequity in

transit subsidies is due to the long distance peak-hour commutes made by the upper income groups on the more costly subway and commuter rail systems compared to the shorter bus trips typical of low income users. For example, in 1983 only 8 percent of commuter rail users lived in households below the poverty level, while 31 percent of commuter rail users have incomes of over $50,000. Prevailing fare systems which fail to capture commensurately higher fares for the most costly trips thus discriminate against the low income transit user who takes less costly trips. Furthermore, transit does not provide a substantial share of mobility for the low income population. The Census Bureau's 1983 Nationwide Personal Transportation Study shows that transit is used for only 6.7 percent (or only 1 in 15) of the 21.2 billion annual local trips made by urbanized area residents below the poverty level.

Unfortunately, the industry's response to transit's efficiency and productivity problems is to cloud over rather than face up to the

facts. The American Public Transit Association (APTA) has recently invented a cost index which measures price changes in a mix of goods and services used by transit systems. The new index obscures the facts about declining efficiency and productivity by throwing up a statistical smokescreen. By using the new index as a measure of inflation without comparison to the economy as a whole, APTA suggests that the inflation faced by the transit industry includes controllable real
cost increases in addition to the general economy-wide inflation. Although APTA has not yet published the details, its use of the index is flawed when it treats the 11 percent increase in average real compensation above the level of inflation between 1980 and 1984 as if it were somehow a normal expense beyond the operator's control. Thus, APTA would have us believe that the industry bears no responsibility for what has happened to the labor costs that account for 70 percent of total industry operating expenses.

The outlook for transit in our cities is grim indeed unless the industry is given incentives to more realistically address the problems facing it. In view of the current budget restrictions, the Congress must expect a decent return on the public investment in transit.

The problems of rising costs and the likelihood of a reduced Federal role in no way reduce the need for mobility. What is necessary are new ways to operate and finance transit that involve partnerships at all levels of government, along with both the public and private sectors of the industry. This will blend the energies of all concerned with transit to assure that our limited resources are used most effectively.

There is no single, simple answer. What is called for is a fundamental change in our approach to providing transit services. Recent experience demonstrates that making transit more competitive and involving the private sector in operations and finance makes a lot of sense. Opening up the public monopolies which have been created in most urban areas is needed. The virtual Federal monopoly on capital financing should also be ended, with increased efforts undertaken to use innovative financing techniques. These solutions are supported by real world examples of success.

PUBLIC-PRIVATE CAPITAL PARTNERSHIP

In the area of public-private capital partnership, private investment from developers and other entrepreneurs who have much to gain from improved mobility can be attracted to transit construction projects, and even operations, if given the opportunity. Developers are willing to bear some of the cost in order to get a transit life line to their projects. Improved transit provides benefits beyond those enjoyed by riders themselves. Transportation investments can lead to substantial increases in property values. For example, increases in property values attributable to transit improvements which exceed the total construction costs of the service have been reported for both Washington's Metro and New Jersey's Lindenwold Line. Non-user beneficiaries of transit, such as property owners, are a potential source of transit funding. By contributing to transportation capital, developers and landowners can reap substantial benefits. These contributions can take the form of joint development, benefit assessment districts or privately constructed improvements.

- Benefit assessment districts have been used to cover 10 to 50 percent of the capital costs of transit projects, and are widely used in other public works projects. A benefit assessment district funded one-half of the cost of the State Street Transit Mall in Madison, Wisconsin, and covers one-third of the Mall's continuing maintenance costs. In addition, the Denver Transit Mall is maintained by a benefit assessment district made up of local merchants and landowners.

- The New York Planning Commission has negotiated transit improvements constructed by developers in return for zoning concessions. Over $100 million in such improvements have been agreed to at this point. Private construction of the improvements has also led to much faster completion than the MTA would have been able to achieve.

- In Boston, a private developer has offered to pay $20 million to construct a peoplemover connecting the Boston waterfront with the South Station area. The peoplemover would provide improved access to the developer's commercial project.

- West Side Transitway - The New York Planning Commission is studying the potential for building a new transit line in an existing railroad right-of-way on the West Side of New York. Currently, over 100 million square feet of development is planned or under construction on the West Side, including Donald Trump's massive Television City project. The developers realize that they must improve transit in this area to make their projects work and have indicated a willingness to make substantial investments in such improvements.

- Dulles Corridor - A private group has proposed building a rail line connecting Dulles Airport with Washington Metro. At first, local government officials were cold to the idea, but as the need for such an approach has become clearer, a more favorable attitude has developed on the part of local officials. Recently, the Virginia legislature passed a bill permitting benefit assessment districts for transit projects such as this. This reverses a longstanding Virginia policy of discouraging such financial approaches for transportation projects. The legislature has also agreed to this type of innovative financing for Route 28, a congested north-south arterial at the entrance to Dulles Airport.

- New Jersey Waterfront - The Hudson River waterfront of New Jersey is staging a renaissance. Where once dingy factories and rail yards dominated the scene, major office and condominium projects are planned or under construction.

  In an effort to provide necessary transportation improvements, New Jersey has begun developing, in partnership with developers, a plan to finance the needed improvements from the private sector. The total cost of transit improvements could be over $400 million, of which a substantial amount is expected to be privately provided.

- Allied Junction - a private firm has suggested a transfer between the Northeast Corridor and certain New Jersey Transit commuter lines in Seacaucus. The transfer would provide better midtown Manhattan service for New Jersey commuters while improving access to the Jersey Meadowlands. In return for the enhanced development potential, the private sector would assist in the financing of what could be a $125 million project.

These examples are only the first indications of the potential that exists. Another approach is to use the increased property values caused by transit as a source of revenue to back transit bond issues. Bonds backed by benefit assessment district revenues or by general property tax revenues have a tremendous potential for providing transit funding. Transit financing has as yet represented only a small portion of local government bond issues. A study by Public Financial Management has found that since 1984, transit has accounted for $10.2 billion, or 29 percent of the total of all transportation issues raised. While this is an impressive sum, it is only 2 percent of the more than $500 billion raised for all municipal bond issues since then. Clearly, the investment community is able to provide more transit funding. The issue is local priorities - is transit important enough locally to warrant a greater share?

Contrast these innovative public/private approaches with the traditional grantsmanship approach that has been the norm. Currently, Congress has earmarked funds to cities that are considering projects with a Federal cost to complete of over $4 billion. Unable to resist the temptation of Federal dollars at 25 cents apiece (or free, in the case of St. Louis), nearly $20 billion in such projects have been proposed. These projects drag on for years, while sponsors angle for Federal funding. By requiring more local financial participation, these projects would attract greater local support, move forward more expeditiously, better meet local mobility needs, and result in sounder public investments.

An important advantage of private sector involvement is that it forces better local planning and better project development. When asked to provide their money for a project, developers insist on coordinated land use plans, minimum goldplating and effective operation. No developer wants to be supporting a transit project with no ridership. If Federal financing is available, the necessary coordination and cost controls that make for cost-effective projects are often lost. Zoning changes aren't made, or feeder bus services, for example, are not provided, reducing ridership. Utility relocation, street repaving, landscape improvements and gold-plated design begin to take a larger and larger portion of the project budget. Public/private partnerships not only can help finance transit projects, they can help make them viable.

COMPETITION FOR SERVICE

Competition for service, through contracting out, will force a much closer evaluation of the problems I outlined earler. We are not suggesting simply turning things over to the private sector -- rather we are talking about promoting competition between alternative providers, public and private. This will force a badly needed and overdue reevaluation of cost and employment practices, as evidenced by the cost savings that have been realized by those communities that have introduced competition. To be competitive, public operators will have to begin to reconsider their organization, work rules, and wage rates to bring their costs under better control.

The potential for operating savings from greater competition is impressive. A recent national survey of transit service contracting by public agencies conducted by Dr. Roger Teal found cost savings of from 10 to 50 percent when service was contracted out or put up for competition. The public agencies themselves estimate a mean savings of 29 percent. More importantly, Dr. Teal indicated that maintaining a competitive environment was the key to continued cost savings, not merely private sector provision of services per se. He concluded that if only those transit systems of 250 or more vehicles -- which account for nearly 80 percent of all operating expenditures -- contracted out but 20 percent of their total service, the savings could total $300 million. A recent survey of UMTA grantees by the Rice Center found that currently only 0.09 percent of total local transit budgets were contracted through public-private competition.

Research indicates the potential for substantial savings, and several cities have acted to achieve real savings through competition.

- Snohomish Country, a growing suburb of Seattle, Washington, has since 1977 contracted with Seattle Metro to provide commuter park-and-ride and express service from urbanized areas in southwest Snohomish County to Seattle's Central Business District. Recently, the county's Community Transit elected to competitively procure about 70 percent of that service. Four proposals were submitted, two firms interviewed, and a contract awarded in February 1986. ATE Management and Services Company began operating the service in September 1986, under a five-year contract for a fixed total price averaging $2.95 million annually. The same service would have cost approximately $4 million annually if procured from Seattle Metro at current costs. Competition has thus saved the county over 26 percent. Of equal or greater significance is the fact that during the first 6 months of service under the new contract, ridership increased about 30 percent.

- Houston Metro had intended to provide all commuter park-and-ride services itself, but decided to contract with private carriers when bid prices were compared to METRO costs as computed by METRO. Even including the cost of contract negotiation and administration, METRO projects a savings of over 24 percent by contracting out the service.

- The Fargo, North Dakota, Transit System (MAT), serves a population of about 70,000, and operates 18 buses. In 1986, MAT awarded a competitive contract for a "turnkey operation" in which the contractor provides bus drivers for all work shifts and road supervision. MAT -- which continues to establish routes, schedules and fares, and to perform maintenance -- estimates that the $311,000 contract will save the system nearly $100,000 in the first year alone -- a savings of about 25 percent, and a reduction of about 11 percent in total system costs. Savings can be significant for even small systems.

BETTER USE OF EXISTING FUNDS

Research indicates that each of the problem areas I identified earlier offer considerable opportunity for savings through increased efficiency.

Transit work rules -- those formal and unwritten rules and practices that govern how work is assigned, scheduled, performed, and compensated -- and the cost of inordinately high absenteeism are a major source of declining labor productivity and cost increases.

Modifying work rules is therefore a promising strategy for improving efficiency and productivity. A study by Rice Center of the cumulative effects of two potential productivity improvements -- greater use of part-time operators and reducing absenteeism -- estimates that the transit industry could reduce total motorbus operating costs by 26 percent. Examples of substantial improvements that are possible from changes in work rules and related improvements in management control include:

o MBTA in Boston has shown that the increased use of part-time operators can produce substantial cost savings. It saved $5.6 million in 1984 by use of 350 part-time drivers.

o Improved management control systems have resulted in reducing absenteeism by as much as 50 percent at Seattle Metro.

In addition, most States will experience a revenue windfall from last year's Federal tax reform legislation. Nationally, the windfall is estimated to total $3.7 to 5.4 billion per year once the Federal changes have fully phased in. Nearly every State is now, or soon will be, engaged in deciding how to dispose of that windfall. It amounts to more than $100 million per year in Virginia; $1 billion per year in New York; $300 million per year in California. In Maryland, for example, the Governor initially proposed using some of those funds to construct two sports stadiums. Clearly, the flexibility exists for the States to address any program deficiencies they see as priority concerns, especially considering that currently States and localities spend less than 1 percent of their combined budgets on transit.

UMTA INITIATIVES

In the past year, we at UMTA have taken several initiatives to encourage transit industry labor and management along with local governments to tap new funding sources and revise operating strategies to improve efficiency and productivity.

- In January 1986, UMTA issued Guidance for Grantee Compliance based on the requirements of the Urban Mass Transportation Act. In December 1986, that guidance was made permanent through the issuance of an UMTA Circular. It requires a locally developed process for consideration of private sector alternatives as localities develop their transit programs.

- Established a technical assistance program, the Public Private Transportation Network (PPTN), to provide expert and peer-to-peer assistance to help localities undertake public/private partnerships in transit.

o 100 percent UMTA funding is available under the Section 8 planning program for communities wishing to explore incorporating private sector alternatives into their transit program.

o UMTA's new Capital Cost of Contracting Policy permits the use of Federal capital grants for the capital component of competitively bid service.

o UMTA is funding demonstrations of private involvement in transit finance. The goal of the demonstrations is to provide seed money to bring the public and private interests together. Developers, transit suppliers and other private sector interests cooperate with transit authorities, local governments, highway departments and other involved officials to develop projects with minimal governmental support. By involving all interested parties from the start, delays and misunderstandings are avoided. The UMTA demonstration studies provide the answers these parties need in order to make their decisions regarding project implementation and finance. Over thirty projects are being considered for grants, located in all parts of the country and in cities large and small. Projects include peoplemovers (Boston), major rail systems (Denver), transit malls (Kalamazoo) and even ferry services (Corpus Christi). Private sector participation in these projects ranges from proposls of a few hundred thousand dollars for the smaller projects up to hundreds of millions for the rail systems (Denver). UMTA has already announced grants to Houston, New York Westside and New Jersey for feasibility studies or to help implement these projects.

o UMTA has joined with APTA to form a Competitive Services Liaison Board to resolve outstanding issues surrounding competition in transit, beginning with recently issued guidelines for comparing public and private transit costs.

o UMTA is continuing its policy of sponsoring workshops throughout the country that deal with the practical application of private sector solutions to public transit problems.

o We expect to fund a number of demonstrations of methods to improve labor-management relations that use gain-sharing as an incentive to reward productivity improvements. Gain-sharing is a promising concept that gives the entire workforce a stake in improving productivity by sharing with them the savings that result from increased efficiency.

CONCLUSION

Mr. Chairman, my remarks have dwelt on the critical shortcomings of the transit industry and the Federal transit program. I am pleased to say that transit management at all levels is beginning to work vigorously to address the challenges of the future. Our budget proposal contains a number of features to encourage increases in transit efficiency and performance. It recognizes the reality of the Federal budget squeeze and maintains the commitment made in 1982 to dedicate one-cent of the Federal fuels taxes for transit. It uses these funds in a deficit-neutral fashion, and in a manner that returns some of the revenues collected from each State to each State.

Mobility is a basic need of our cities and communities. It is important that we develop a more accurate understanding of that need and how the Federal transit program can help meet it. We will continue to work with States and localities to address these challenges.

We must begin by realizing that there is no overall national public transportation system. Each service area and its mobility requirements are unique. It is only a matter of convenience to refer to local public transit systems, as a group, as the "industry." Local mobility programs are shaped by public policies peculiar to each locality. Federal transit assistance programs, on the other hand, have remained too inflexible and limited in their application to support a full range of local options.

Our request reflects that reality by encouraging greater reliance on local decisionmaking and resources, by establishing a 50 percent local match and by including underused private resources. As is shown by the experience of many communities throughout the country, better local decisions are resulting in both better and more public transportation. Your support of the program we are proposing to foster greater use of local resources will result in better balance for urban mobility.

I appreciate the Subcommittee's attention, and will be pleased to answer any questions you may have.

IMPACT OF REDUCED FUNDING

Senator LAUTENBERG. I assume that transit projects you called off among the various communities included Montclair. Just by sheer coincidence it is a place that I visit frequently, every week as a matter of fact. We want you to not only of course help Montclair but help all of the communities of New Jersey.

When you talk about the port authority, you and I know very well how wonderfully that agency functions. That agency is essential. The fact that it is joint ownership between the two states notwithstanding, this is a public agency. And what it does, it really epitomizes how to use funds from vehicle users, bridges, tunnels, airports, to encourage mass transit.

It is very effective, just look at the ridership on PATH, and just look at the use of the bus terminal in New York. So I think that whenever we look at what can be done with an appropriately operated public agency, we see some pretty good results.

I read your testimony last night and sensed that you have an objection, perhaps I misunderstood, to the use of funds for subsidies for transit systems and that essentially your recommendation would abolish about 2 billion dollars' worth of funds that are now available. Obviously, and we have discussed this before, you know that we differ on this.

Mr. Stanley, before the Senate's override of the President's veto of the Surface Transportation Act of 1987, you had a number of objections to the transit title. In fact, your proposed budget severely reduces the level of federal support for mass transportation. To what extent has UMTA studied the long-term impact of these reductions on projects already underway or planned?

Mr. STANLEY. In terms of federally financed projects that are already underway, our effort in the budget would have distributed the trust funds on a formula basis. As for the impact on the capital projects currently underway, we have made no direct effort to study what that impact will be. I do not think that would have been fruitful until we were able to convince the Congress of the lower level of funding.

But on the capital side we are, even with the passage of the bill, looking at a reauthorization level about 20 percent lower than what has occurred over the prior 4 years. I believe that what is happening around the country, in Denver, CO, in Houston, Dallas, in New Jersey, is that the perception or recognition of reduction in federal spending has resulted in higher levels of local and state funding.

I believe that is occurring on the capital side, and on long-term effects on what have been some minimal cuts in operating assistance, none of the service cutbacks that we can determine have resulted directly from reductions in federal assistance.

FUNDING IMPACT ON THE ELDERLY AND DISADVANTAGED

Senator LAUTENBERG. You looked at this in terms of the reduction's effect on programs for the elderly, handicapped, poor. What do you see happening with those programs?

Mr. STANLEY. In terms of direct programs, our 16(b)2 program, which provided vehicles for the elderly and handicapped, we kept funded at about the same level.

In terms of the direct impact on lower income classes, one of the criticisms that I have had of the program as structured and as continued in the authorization bill is that it is not the most effective way to deliver needed subsidies to that income group.

I do not think there has been an economic analysis of the distribution of our subsidies or any objective review which indicates that we are efficiently distributing mass transit subsidies to the transit dependent. This criticism of the program is one that is valid at whatever level of funding that we adopt.

Senator LAUTENBERG. There is a question, a serious question, about whether or not systems are designed to carry all the volume of traffic that they could. Unfortunately, New Jersey is almost a microcosm of the nation in so many ways.

We have our depressed cities, without jobs available in the cities. People have to travel to get them. The only places they can afford to live are in our cities. And without public transit these people are virtually prisoners of their economic situation as well as their social standing.

REVERSE COMMUTE

Mr. STANLEY. I could not agree more, and I mentioned that point in reference to the Meadowlands. A question that I have been talking about for the last year is the different demographics of where those jobs are being created.

One of the disappointments in the authorizing legislation, and one of the needed improvements that is a challenge to this industry is just that problem. Namely, the commute of the transit-dependent inner-city resident to where the jobs are being created.

I have often spoken of Washington as an example of that, and one of the assistance programs that we are involved in is with Rev. Knoll. As part of a jobs program, we are providing him with vehicles to get inner-city residents out to the jobs that are being created in the Dulles Airport area out in northern Virginia and in Maryland, which are very, very poorly served by fixed-route transit.

It is great to have 20/20 hindsight, but the truth is that some of the fixed-rail systems, and I would say this case is happening in Miami as well, are not serving that part of the population.

And I would like to submit for the record and for the committee's consideration what we are attempting to do with a number of groups ranging from the Association of Neighborhoods, the Urban League, to try and make that recognition of the reverse commute which is so critical, something that transit authorities address in the next several years.

[The information follows:]

RECOGNITION OF THE REVERSE COMMUTE

As part of UMTA's private sector initiatives efforts, we began last fall to have conversations with various consumer groups representing transit dependent and inner city citizens. The purposes of these conversations were to determine how well public transit was serving the needs of these citizens and to explore if they thought private sector strategies might help to solve some of their needs.

Among the groups that we talked to were the National Association of Neighborhoods, the American Association of Retired Persons, the Association of Area Agencies on Aging, the Consumer Federation of California, the Consumer Union of the United States League of United Latin American Citizens, the National Association for the Advancement of Colored People, the National Center for Neighborhood Enterprise, the National Hispanic Council on Aging, the National Urban League, and the Urban Education Foundation.

Through our initial meetings last fall, we discovered that consumer groups representing these citizens have an interest in public transportation and are well aware of its importance to those whom they represent. We also found a deep frustration and a concern that transit services are not responsive in meeting the needs of transit dependent persons even though many transit authorities have citizen advisory groups. In general, consumer groups desire more control over the design and delivery of services in their own communities.

As a followup, we have assisted the National Association of Neighborhoods, working with the consumer groups mentioned above and Market Opinion Research, in further analyzing the concerns and attitudes of consumers in these communities: Philadelphia, Miami, and San Francisco.

Attitudes were examined through a series of local meetings with consumer leaders and through a survey of citizens within the community. These analyses reinforced earlier perceptions of consumer dissatisfaction with transit services, a desire for services more tailored to community needs and a desire for greater community-level control over such services. There was also a receptivity to private sector alternatives that provide greater opportunity for community-level groups and local and minority business enterprises to design and compete for service provision.

To illustrate the type of service needed, I have often mentioned a specialized private service developed by a Lutheran minister, Rev. Tom Knoll, in Washington, DC. He provides a low-cost service for the unemployed D.C. residents to construction sites in northern Virginia, with employers subsidizing a part of the cost. If these workers were to take Metro, the expense and the travel time would be prohibitive to such workers.

The key point is that we have to make our services more responsive to the marketplace and the needs of those most dependent upon public transportation. We need a diversity of providers and service strategies; we can no longer afford simply to look to one provider offering a single service strategy. We need to tap the resources of civic organizations, developers, merchants and employers, and a whole host of private providers ranging from nonprofits to minority-owned business interests to well established transportation providers in solving our transportation needs.

We have found the consumers of transportation eager to become participants in achieving transportation systems that can effectively respond to new demands and believe that they should become active partners in shaping the service strategies in their own neighborhoods and communities.

Our new policies that ask grantees to actively consider such private sector alternatives and the potential cost savings that can result will hopefully offer new opportunities for consumers to participate and develop service that will truly meet their needs.

USER FEES TO FUND PUBLIC TRANSPORTATION

Senator LAUTENBERG. I have heard that view of yours before, and I frankly think that it is, relatively speaking, a surface analysis, because whether it is simply direct service in to the poor areas, or available service throughout the region or the state, all of these things tend to move people and goods more efficiently.

We have just got to do that. There is not a developing city in this country, no matter how far remote these cities used to be, Denver, Salt Lake, Dallas and so forth, every one of them is jammed with automobile traffic. It is impossible to move. Their highway construction can not keep up with the needs. The deterioration is faster than the building of these things.

We have just got to find better ways to move people around. New Jersey's prosperity has been obviously a blessing. It has also created some rather bleak and difficult traffic problems. There is only one way, it seems to me, that we can accommodate that traffic, unless we transport everybody by helicopter.

Setting budgetary issues aside, do you believe it would be good public policy to fully finance public transit from motor fuel or other users fees?

Mr. STANLEY. The principle of funding public transit from user fees is one that is consistent with the administration policy and is the best policy way of funding transit rather than by the use of general revenues. There is a certainty involved in user fees, and I think there is a direct relationship which is understood by both taxpayer and rider to the benefits of those sorts of funding mechanisms.

BUDGET REQUEST TO OMB AND THE SECRETARY

Senator LAUTENBERG. This committee's understanding is that the resistance to transit funding lies in the Secretary's office more than it does in OMB or in your office. What was your request to the Secretary's office? What was the Secretary's request to OMB?

Mr. STANLEY. Our request to the Secretary's office last summer was for a program fully funded out of a trust fund of approximately $1.7 billion. The request that went from the Secretary's office over to OMB was $1.6 billion, and the request in the President's budget that went up was about $1.4 billion. So there is a variation of about $200 million.

During that time there was a discussion with the Secretary's office of the possibility of dedicating a second cent from the existing gas tax to transit. That was also a proposal that OMB responded favorably to during the deliberations on the debate. But it did not get adopted in the final budget.

Senator LAUTENBERG. So it is fair to say that even though the degree of difference appears on the surface to be relatively small, that the resistance comes as the requests move around, the pressure becomes greater.

Mr. STANLEY. It is very difficult to hide those requests from the highway interests. As those requests move around the highway interests express their view on utilizing another penny of the gas tax for transit, which was not widely applauded back in 1982 when the principle was established.

I think there is concern about whether or not that would be supportable.

Senator LAUTENBERG. Yes; the Congress felt differently and the thing that I wanted to get at is whether or not your view of public transit is as we hear it expressed, or whether in fact you are being dutiful in your responsibilities to the Department of Transportation, OMB, et cetera, because coming from New Jersey you have to know how serious the transit needs are, again using New Jersey as an example.

Obviously this committee's function is not simply to make New Jersey a better place than the wonderful spot that it really is now.

Mr. STANLEY. I hope we can try. We can try.

PUBLIC-PRIVATE PARTNERSHIP

Senator LAUTENBERG. One of the hallmarks of your tenure as Administrator is the advocacy of the public-private partnership in both delivering and financing of public transit services. How successful is this partnership, and how would you describe the transit industry's efforts in promoting the public-private relations?

Mr. STANLEY. We have been advocating this partnership for 3 years. Initially there was a lot of confusion and frankly resistance in the industry. I think in the last 2 years that confusion or concern has now gone to a point where I think the transit industry is being very supportive of it.

As I indicated earlier, about 84 percent of our grantees have a process in place to consider private transit providers. A number of them are looking at projects. Very frankly, Mr. Chairman, 2 years ago it made for great speech material for me going around the country. In the past 12 months we have seen what I consider the sort of bricks and mortar proposals from a number of transit authorities which are very innovative in forging those public-private partnerships.

One I will mention by example is in Boston where a developer has offered the transit authority a 100-percent financed people mover from the World Trade Center to downtown Boston, a link which the state, city, the development authority, and the transit authority recognize needs to be made. And in my view it is essentially a $20 million funding source otherwise not available to the transit authority.

I think the potential in the Hudson transitway is enormous to forge that kind of partnership with public funding. And I am very excited by the response on the projects that we have seen in the last 12 months. I believe that in the next couple years we will see a number of them actually built.

Senator LAUTENBERG. We do see companies and business associations joining together to consider these things. The problem as you know is that we are more likely to be able to find those situations where there is new opportunity, a la Meadowlands, the trade center up in Boston, other places that we could quickly point to, as contrasted to the poorer communities that have an eroding tax base, where the political clout does not exist.

The needs there are perhaps even greater. And I do not know that we are going to get the private side to come in there. Because it is not designed to be a public service. I am not discrediting it. I think it is a good idea.

In Atlantic City part of the funding for the rail terminal there, as you know, is coming from the private sector. And I think that is fine.

Mr. STANLEY. We also have a very interesting proposal in Camden, which is an area that has had economic difficulties.

And again, my view is that to the extent we can get private funding into the Atlantic Citys, the Hudson transitways, the Meadowlands, that frees up funds that can be targeted toward——

OFFICE OF PRIVATE SECTOR'S BUDGET

Senator LAUTENBERG. Right. But we dare not obscure the fact that there are lots of places where this service is needed and we are just not going to get the private sector to come in there and do it. That is always the case, by the way, at least with government funding.

Of the funds provided for administrative expenses for fiscal year 1987, how much went for UMTA's privatization experiment?

Mr. STANLEY. On direct grants for studies and efforts on privatization in the last fiscal year, we spent about $1.8 million under the section 8 planning program.

If you look at the money that we distribute by formula to planning organizations, also under section 8, where they are allowed to do whatever they want in most cases, and look at the number of them that have undertaken privatization efforts themselves, about an additional $6 million in funding on those studies have gone into privatization. I think the budget for the Office of Private Sector Initiatives, which would be direct administrative costs, is about $300,000.

PRIVATIZATION BUDGET FOR 1988

Senator LAUTENBERG. What are you budgeting for the privatization efforts in fiscal year 1988?

Mr. STANLEY. It is an emphasis area under what we would have for the research and training program.

Mr. BUTLER. Mr. Chairman, it is hard to come up with a firm figure, but we can provide that for the record. Basically what was spent directly by UMTA this fiscal year we would expect to again spend next year.

Then we also have to consider, as Ralph is pointing out, the section 8 emphasis areas that we do not have control over. The MPO's will program those type of projects and then we can after the fact tally up the numbers.

[The information follows:]

Depending on the level of appropriated funding, we expect our efforts to be roughly at the same level as in fiscal years 1986 and 1987, as follows:

Program area	*Fiscal year 1988 (estimate)*
Section 8 planning	$8,500,000
Section 6 research	8,000,000
OPSI administrative costs	400,000

Senator LAUTENBERG. Let us know what that is going to be. What sources do you plan to draw these funds from?

Mr. BUTLER. Well the funds for the Office of Private Sector are obviously administrative funds. Section 6 funds would be for research items and section 8 for planning projects.

PRIVATIZATION APPROPRIATION LANGUAGE

Senator LAUTENBERG. Last year the committee included bill language regarding UMTA's privatization efforts. The administration's requested bill language for fiscal year 1988 does not repeat this language. Do you know why?

Mr. STANLEY. The bill language, essentially, we would deem to be redundant. There was a fairly widespread concern in the committee and in the industry, that the requirement to have a policy on privatization was somehow linked to either grant releases or grant conditions.

That process is satisfactorily in place with most of our grantees. I think the language imposes restrictions on us that we feel we are already complying with. The simple reason is we feel at this point it would be redundant. Working with the industry we have been able to indicate to them that none of what was feared was happening.

Senator LAUTENBERG. Did the fiscal year 1987 language have an effect on what UMTA would have done in this area?

Mr. STANLEY. No; we tried to explain that it was a concern of ours, but that we were not conditioning a formula grant on any specific level of private sector involvement. We were actively advocating it, but certainly not making it a condition of our fund distribution.

SAVINGS FROM CONTRACTING-OUT SERVICES

Senator LAUTENBERG. You stated in your prepared remarks that public agencies themselves estimate a near savings of 29 percent for contracted-out services. If that is so, what have the public agencies done to capture this 29 percent savings?

Mr. STANLEY. I think that a number of the public agencies that contract-out and capture the savings put the funds into increased service. Some of the savings also go toward budgets that have been reduced, but our argument for contracting-out is not just that it is prudent to do so in a time of restricted funding.

An example is the Chicago Transit Authority, which contracted-out its elderly and handicapped service. They took the savings that they made and added additional service. So really, the savings are up to what the transit authority decides to do with them.

PROJECT MANAGEMENT OVERSIGHT

Senator LAUTENBERG. Let us talk for a moment about project management oversight. What benefits has the project management oversight approach achieved?

Mr. STANLEY. The project management oversight approach, which we instituted after applying it in a case in Miami, enables our agency to carry out our oversight responsibilities on major capital projects much better than we were able to do before.

We have 10 PMO's under contract, with 9 of them working on 23 projects right now. They report to me quarterly and to the agency on the progress of all of the major construction projects. It has helped introduce value engineering, and helped to catch some of the construction costs problems in the beginning of the project, rather than at the end.

I think the best example which I would like to submit for the record was a letter we got from the general manager in Sacramento, regarding a project which had some construction problems. Our PMO enabled us to find out about a Buy American problem.

The general manager wrote to us after completion of the project to say that if we were ever to undertake another project like that he would welcome having the project management oversight firm involved, because it enabled them to make some corrections on the project before it was too late.

[The letter follows:]

LETTER FROM DAVID A. BOGGS

APRIL 3, 1987.

Mr. AL DELLIBOVI,
Deputy Administrator, Urban Mass Transportation Administration,
Washington, DC.

DEAR AL: Thank you for coming to Sacramento to participate in the grand opening of the RT Metro light rail system. We appreciated your comments and especially the super nice remarks about me and my wife.

Ridership has been very good and we expect a significant increase when the bus feeder network is implemented on April 5.

UMTA's decision to utilize project management oversight on their projects is a welcome addition as far as I am concerned. The staff of Hill International has been excellent to work with and they have added significantly to the quality of our project and, in so doing, I am sure have saved money on our project. If I were to ever be involved again in a similar project, I would include project management oversight as a key part of the project. My sincere compliments to UMTA for being in the forefront of this type of innovation.

Further, the assistance of Brigid Hynes-Cherin and the staff of UMTA Region 9 were also quite helpful to RT's project.

Again, thanks for coming to our grand opening.

Sincerely,

DAVID A. BOGGS,
General Manager.

PROJECT MANAGEMENT OVERSIGHT

Senator LAUTENBERG. Has the cost of the project management oversight project been justified?

Mr. STANLEY. Oh, I think amply justified. The institutionalization of the process in the authorization bill enables us to use one-half of 1 percent of the project funds to do it on the major capital projects. In a year or so we will be able to show the committee substantial savings that have resulted from items that our PMO contractors have been able to catch.

Senator LAUTENBERG. Are there any changes that you would propose for the project management oversight approach?

Mr. STANLEY. I think now it has been running very well. It is one that the agency is becoming much more comfortable with, and I think the grantees are recognizing it as a tool and a way to help them also monitor the progress on the project.

ALCOHOL AND DRUG ABUSE REGULATIONS

Senator LAUTENBERG. On August 13, 1986, the National Transportation Safety Board [NTSB] recommended that UMTA undertake a series of improvements to minimize alcohol and drug abuse within the nation's transit systems.

The Safety Board recommended a number of provisions including testing of employees involved in rail rapid transit accidents, require screening for alcohol, drug abuse prior to employment in safety sensitive jobs, encourage the creation of effective employee assistance programs, require rail rapid transit companies be equipped with operable radios on all trains operating in revenue service.

What has UMTA done to address these questions?

Mr. STANLEY. With regard to the issues raised by the NTSB on alcohol and drug abuse, I can say that we fully support all of their recommendations.

There is a question in our legislation on the extent to which we have jurisdiction and the ability to require an alcohol and drug abuse program, the reason being that it is, as you are aware, in very few cases, transit in interstate commerce.

We are in the process of drafting a regulation that would be similar to and consistent with the alcohol and drug regulation that the Federal Railroad Administration has worked on.

We attempted this past spring, in working with the Commerce Committee, to get statutory authority to clarify our ability to do so. We are, however, proceeding with the regulation on the alcohol and drug abuse within the agency.

But I would caution you, Senator, there is a real serious question unique to us among the modes as to whether or not we would be successful in implementing that kind of a federal regulation, given the local nature of transit operations.

I would also say the emphasis area in the technical assistance program this year will be on alcohol and drug abuse programs. We have been in touch with a number of the other transit authorities, all of which are at varying degrees of adopting programs that are fairly rigid.

We have encouraged it. The Secretary is very supportive of the regulation I outlined to you, and we hope to make progress on that.

Senator LAUTENBERG. Do you need any legislative assistance to provide expanded authority?

Mr. STANLEY. We do, and we would very much like to work with the committee this year to technically draft for you some of the language we believe we need to assure that we have got the authority—what we have right now frankly is just part of our authorizing legislation that says that transit authorities need to have the technical capability to carry out the program. There is nothing directly related to alcohol and drug abuse as affects the safety operations, and that assistance would be very welcome.

Senator LAUTENBERG. The operable radio portion, that is something you can do. Has there been any attempt to see that that equipment is there and operating? I mean, we have seen the result of, at least if not the result, the effect of not having an appropriate communication system operating in the case in Maryland.

NTSB INVESTIGATIONS

Mr. STANLEY. I will say that on a case-by-case basis, we are directly assisting with some of the NTSB accidents. SEPTA had an incident on the Norristown line in which one of the indications is the lack of that kind of communications equipment, although NTSB has not completed their investigation.

Senator LAUTENBERG. The accident investigations by NTSB on the New York City Transportation Authority have documented unsafe practices by the system and their contractors performing construction. Do you believe that UMTA has adequately overseen these projects to assure the safety of the work performed, to assure the safety of the traveling public?

Mr. STANLEY. I think we can do better in that regard. What the PMO enables us to do in terms of having an onsite team addressing that issue, has really strengthened our hand in overseeing those projects with regard to safety. I will just cite as an example of that, the 63rd Street project. We met just the other day, and our PMO again brought to our attention, the need to assure that the ventilation system on the 63rd Street project was adequate enough in the event of a fire.

It is those kinds of safety related items in which our oversight responsibility has been strengthened quite a bit, by the ability of the PMO to go in and ask those questions.

Senator LAUTENBERG. You have an obligation under section 22 to use your efforts to make sure that these systems are operating safely. You have the right to withhold funds. It is the committee's understanding that UMTA has declined for the most part being a party to the NTSB accident investigations. Is that true?

SAFETY INVESTIGATIONS

Mr. STANLEY. We have sent witnesses to the investigation and participated with NTSB. For the first time just several weeks ago we initiated the first agency section 22 safety review. This is not an investigation, but is a review whose conclusion will be, what is wrong on the Norristown line and in SEPTA, what needs to be done to repair it, what funds are necessary to do so, and if the steps are not taken the threat of withholding the funds is something that we would exercise.

We also had difficulty at the time getting from the NTSB their findings on Norristown. But we are attempting to work very closely with them and have, I think, in every instance I can recall, either sent a witness or sent a member——

Senator LAUTENBERG. They are pretty open, we have found, in terms of making information available. Their mandate forces them to do that.

I sense that UMTA has been dragged, kicking and screaming a little bit, to get involved in some of these safety matters. I would like to hear from you. Do you think that you have been as diligent in terms of the safety areas as the agency might be? This is not a personal reflection. It is just that you have got a lot of ground to cover at UMTA.

SECTION 22—SAFETY

Mr. STANLEY. Again, I think we could have been more diligent. But if you look at the pattern in the last 18 months, we have initiated the first section 22 effort with the SEPTA system.

The penalty of withholding funds is an extreme one. And I think that we step forward in that situation, and I think the diligence is increasing.

Our role in safety in this is going to increase and has increased because of the questions being asked by our project management oversight.

Senator LAUTENBERG. Even the threat of withholding funds, I think, might induce some of these agencies to get going on things. But you have got to prod them along wherever you can.

Mr. STANLEY. We are doing that, and I believe that underscores the seriousness of our concern about safety more than the NTSB can do.

Senator LAUTENBERG. Has UMTA ever suspended a federal grant to a transit authority because of what it considers to be an unsafe situation or operating practice?

Mr. STANLEY. We have suspended funding on the 63rd Street Tunnel because of our concerns about the cracks and what I would say are largely construction and safety related problems.

In fact, as our effort to work with New York City continues on that, we have not allowed any funds to be drawn down, most recently until we are assured that there is an adequate ventilation system in place that could evacuate the tunnel in the event of a fire. Those funds have been suspended and withheld for that purpose.

NEW JERSEY TRANSIT

Senator LAUTENBERG. As you are aware the number of people residing in New Jersey, working in New York, continues to grow and vice versa, causing the existing trans-Hudson auto transit crossings to be terribly congested. New Jersey Transit is responding to this situation by undertaking a significant planning effort to identify cost effective ways for decreasing this trans-Hudson crisis.

What is your view of the effort so far by New Jersey Transit?

Mr. STANLEY. I think that the New Jersey Transit efforts have been admirable. I think they recognize the problem.

I am particularly excited by the adoption recently of the port authority's capital plan, which had significant improvements in there, including the possibility of ferry service to address the trans-Hudson crossings. We are very familiar with the Penn Station access study, which is being developed.

As I indicated earlier, we have offered New Jersey Transit funding to advance the engineering on the alternatives that they are looking at to accelerate those capital programs. The port authority has established its capital program, and New Jersey Transit is about to give birth to its long-term capital program.

RAIL MODERNIZATION STUDY

Senator LAUTENBERG. The rail modernization study first requested in the Senate appropriations report accompanying the fiscal year 1980 bill, finally came out in February of this year. The report suggested that an investment of $18 billion would achieve 100 percent of the expected benefits for all of the 186 branchlines investigated.

Does this suggest that the section 3 rail modernization funds need more than the traditional $400 million a year?

Mr. DelliBovi. I would say it does not, Senator, for the reason that two important things that we learned were related to the delay in completing the rail mod study.

First was that 85 percent of the riders of those 186 lines could be benefited by an investment of half of the $17 billion. In other words, $8.5 billion would improve the condition of the lines that 85 percent of the riders use.

The second thing indicated is that, in view of the changing demographics in this country, it may not be enough to just rebuild what existed in 1920 or 1930, but rather to review the changes in the lines. That is what New Jersey Transit, by the way, is doing, particularly in the Montclair, Kearny area.

They are saying, people have moved, how can we in rebuilding the system that we have, plan to meet the needs of the riders we have today but also of the riders that have moved.

So it is a longer process, and I believe the $400 million would adequately enable the industry to move forward, work on the benefits for 85 percent of the riders, and then develop the plans. It is not easy developing those plans. Some of them are very difficult to do. But I think it can be done.

Senator, I will provide for the record tables showing the ability of the industry to commit funds. One of the things we found is that there is nearly half a billion dollars in funds available in the New York and northeast New Jersey urbanized area that have not even been applied for or put under contract.

We see this over and over again. It takes a while to spend mass transit funds. We will provide for the record tables showing that the industry has more funds available now than it can handle in the near term.

[The information follows:]

COMMITMENT OF FISCAL YEARS 1984–87 UMTA FUNDS PROVIDED TO MTA AS OF MARCH 31, 1987

[In millions of dollars]

	Federal funds	Local match
NYCTA:		
Funds awarded fiscal years 1984–87	1094.1	311.8
Funds committed to contract (3/31/87)	668.9	195.3
Funds uncommitted to contract (3/31/87)	425.8	116.5
Commuter railroad:		
Funds awarded fiscal years 1984–86	404.2	120.5
Funds committed to contract (3/31/87)	347.0	105.7
Funds uncommitted to contract (3/31/87)	57.2	14.8
MTA totals:		
Awarded funds not committed to contract[1]	483.0	131.3
Fiscal year 1986 section 9 carryover	154.9	48.8
Fiscal year 1987 section 9 funds available (approximately)	245.3	61.3
Total funds available for use[1]	883.2	231.3

[1] Includes $45.3 million of lapsed funds ($17.7 million discretionary) that cannot be reprogrammed for uses other than originally provided.

RAIL MODERNIZATION

Mr. McManus. Mr. Chairman, I would like to make another point that in addition to the discretionary account of some $400 million for rail modernization, there is also on the average of about $600 million a year that has been allocated to rail modernization from the section 9 formula program.

So over the past 4 years the average total annual expenditure for rail modernization under the program has been about $1 billion a year. Then when you add the local share, you are up to around $1.25 billion. Project that over a 10-year period you are talking about $12 billion being spent against this demand, or this total estimate of cost of $18 billion.

Mr. DelliBovi has pointed out that you could get 85 percent of the benefits for half of that $18 billion. So that the level of spending from the authorization level that currently exists, that Congress has just approved, would certainly accommodate, we think, this demand.

Senator Lautenberg. I hear you trying to justify the reduced expenditure from a project analysis that was done a long time ago. When your colleague indicated the ability to use these funds we were talking about something less than $1.2 billion or what have you.

Mr. McManus. I think Mr. DelliBovi is referring to the draw down of money that has already been granted.

Senator Lautenberg. Let me ask you, does the study, the rail mod study, suggest any legislative changes or appropriations actions that should be taken relative to the rail mod needs?

Mr. Stanley. I would think one of the things that we would like to work with the committee on is to define what is a rail mod project, and what is not. The demand as you indicated in the rail mod cities is enormous. The pressure on new projects is also great. What I see as a trend for cities that are not rail modernization cities is to attempt to get part of that funding.

There was testimony and some indications from the Washington Metropolitan Transit Authority that they were interested in getting up to $30 million a year in rail modernization funding. There are two areas that we would like to work with the committee on. The first area is to define who the eligible recipients of rail mod funds are.

In the second area, as Mr. DelliBovi indicated, we are encouraging the rail mod cities to apply those funds to the projects that have the most immediate ridership benefits. In a way we are attempting to do that with the new projects as well, so that those first $8 billion are spent as much as possible on the priority rail projects.

SEPARATE FUNDING FOR SAFETY

Senator Lautenberg. May I ask you this then, should appropriations be directed to particular safety concerns or should there be a safety category within the section 3 program? Do you think that ought to be included?

Mr. STANLEY. As an emphasis area safety is important. My reaction is, it would be difficult for us to really define a project exclusively in terms of the safety factor. Almost any improvement on an old railline can be related to safety, whether it is replacing the track, replacing the cars, improving the stations, the lighting, or communications equipment. In all of the rail mod grants that I have read, there are a number of things that I could always point to as a safety activity.

Senator LAUTENBERG. Well, air conditioning and things of that nature of course are not included in the safety factor.

Mr. STANLEY. No.

Senator LAUTENBERG. There are many things that can be included. I am talking in particular about safety. Obvious directed safety improvements. Should that be part of the section 3 program?

Mr. STANLEY. I do not think it is necessary as a separate funding category. The support for having the transit authorities apply their funds immediately to those areas to assure that the system is going to be operated safely, I think we would welcome that support from the committee.

Senator LAUTENBERG. I am going to welcome my colleague, Senator Harkin, and ask him if he would like to ask questions of the witness.

CHARTER BUS REGULATIONS

Senator HARKIN. Thank you very much, Mr. Chairman. I apologize for being late. We just came from another hearing. As you know we all have these every morning.

Mr. Chairman, I have some interest in a couple of areas, one dealing with the charter bus regulations, which have recently been finalized, and also some questions dealing in my capacity as chairman of the District of Columbia Appropriations Subcommittee.

First of all, Mr. Stanley, I would like to discuss with you this area of the charter bus regulation. I have received a lot of mail and phone calls, not only from my area but other areas about this final rule.

I am concerned about a couple of areas. First of all, am I to understand that under the regulations, section 604.11, requires recipients to complete a, quote, public participation process in the event they intend to provide charter service with federally assisted buses.

Section 604.11(b)3 requires as part of this public participation process the mailing of a notice to two private corporations—the United Bus Owners of America and the American Bus Association.

Now the regulation is completely silent on what they are supposed to do with it. Once they get the notification they can notify some of their members, not some of the other ones. What if I had a charter bus company in my area that is not a member of either the United Bus Owners of America or the American Bus Association?

I find that rather interesting, that one section requires a public participation process. A subparagraph that mandates that you notify two private corporations, two private corporations, without any instructions to them as to what they are to do with it.

Could you please explain this?

Mr. STANLEY. What we are attempting to do first in that is, provide what we felt was the best and broadest public participation process, one, that could be with a local notice in a newspaper ad or the way we normally provide a notice. And, two, those two associations are not private corporations, but trade associations representing, in my understanding, about 98 percent of the charter operators.

Senator HARKIN. Just a second.

Mr. STANLEY. The idea is that the trade associations would disseminate the information to those private operators that were looking to provide charter service and therefore ease the burden on grantees that seek to determine whether or not there are willing and able private charter operators.

Senator HARKIN. Those two organizations are not public organizations. They represent privately owned bus companies. They are trade associations representing private——

CHARTER BUS-NOTIFICATION PROCESS

Mr. STANLEY. Right. You said they were private corporations. They are nonprofit associations that represent private corporations. Correct.

Senator HARKIN. Nonprofit, private organizations, trade associations.

Mr. STANLEY. Right.

Senator HARKIN. A lot of trade associations represent private businesses. Right?

Mr. STANLEY. There are a lot of them. Right.

Senator HARKIN. Do you know of any other instance in federal regulations where the public body, in this case UMTA, is required to notify two private trade associations? Or of any other, of anything else in the federal government? I am not aware of any other instance like this.

Mr. STANLEY. I would be glad to search for the precedent on that.

[The information follows:]

NOTIFICATION REQUIREMENTS

It is important to emphasize that the underlying purpose of this provision is to provide as much notice as possible to determine whether there is at least one private operator willing and able to provide the charter service that the public body desires to operate. Thus, section 604.11 requires a grantee to publish a notice in a newspaper of general circulation of its proposed charter bus activities, and to send a copy of the notice to all private charter service operators in the area and to any such operators who request notice.

The addition of requiring notification to the two national trade associations mentioned in the regulation was an effort to get as much notice as possible to the private bus industry, based on the assumption that these nationwide associations would be able to notify their members who might be willing and able to provide the service. As an alternative, we had considered requiring a grantee to publish a notice of its proposed charter activities in the Federal Register, but we concluded that this would have been too burdensome on the grantee.

We are not aware of any other regulations issued by the Department that specifically require notice to trade associations, although some do require notice in a more general way. For example, the Department's final rule on nondiscrimination on the basis of handicap provides, in the subpart relating to mass transportation services for handicapped persons, that a recipient of federal funds must develop a program for handicapped persons through a public participation process. The regulation provides that that process, at a minimum, must include consultation with handicapped persons and groups representing them, transportation and social service organizations, concerned state and local officials, and the metropolitan planning organization. In addition, the Urban Mass Transportation Administration/Federal Highway Administration joint regulation on environmental procedures requires circulation of draft environmental impact statements to public officials, private interest groups, members of the public directly affected by the draft, and certain government agencies.

Senator HARKIN. I would like to know if your general counsel can provide me any precedents.

Mr. STANLEY. OK, we will provide that information. We also rely on the American Public Transit Association to publish notification of our grants that are released. Why? Because they have a very able and active way of disseminating that information to public transit agencies.

It is an attempt, Senator, simply to find the most efficient and thorough way to disseminate the information. The other choice would be to say that we would like that notice to be published by all of these small transit agencies in the Federal Register, which I think would be a silly way to disseminate the interest in providing charter service.

Senator HARKIN. Well, it would just seem to me that, you can publish in the newspaper all you want. But if I had a private bus company that was not involved in one of those two trade associations, and there are many of them, that the one that I might be competing with would have a distinct advantage over me because they would be notified far in advance, by their trade association who, once they were notified by you, would pick up the phone and call them right away.

The other one may have to wait and see it in the newspaper, and it is buried back in the ads someplace, and they may not know about it. And generally speaking, those are very small operations and those are the ones that would be hurt the most by that kind of notification process. I just find it very curious.

Mr. STANLEY. Well, our principal notification process is local because the charter service would obviously be local.

Senator HARKIN. I am sorry. I did not hear you.

Mr. STANLEY. The principal notification process is a local one. The addition of having the notice provided to the two nonprofit trade associations for presumed dissemination to their membership was just an extra step on our part to make sure that the information was disseminated.

Senator HARKIN. Well, I would like to see some precedents on that. I am just not aware of anywhere else, and I have been around some time, and I know about notification in the Federal Register, I know about notification in publications.

But not where it is specifically stated in the regulation itself, in the rule itself, that two private trade associations, or one, would be notified like that. Maybe you can find something for me. I am not aware of any.

Mr. LASALA. Senator, we will look. And off the top of our head we are not prepared to cite to you any precedent for that kind of approach.

Senator HARKIN. And you may have some. I just find it very curious.

Mr. LaSala. The only point that I would add is that if there is a concern that some of the transit authorities have expressed about certain customers of charter service not being able to get the service they are requiring because of this rule, what we attempted to do in the rule was to disseminate that as broadly as we could so that the needs of the customer could be met.

CHARTER BUS RULE

Senator Harkin. Let me ask you about this rule itself. Basically what you are saying in this rule is that these public transit authorities cannot provide charter service on a private basis, profit basis, if in fact there is a competing private charter service available in that area. Have I summarized it?

Mr. LaSala. Yes; that was the thrust of the rule.

Senator Harkin. What if we have a situation where we have a transit authority that is a recipient of UMTA funds, and in that area there is one other private bus company. Just one. No others. Just one.

If the public transit authority is not allowed then to engage in charter service, does that not give a de facto monopoly to the one that would be existing there? How do you cover that?

Mr. LaSala. The way it is covered in the regulation is that if there is one willing and able private operator in the region who wishes to provide charter service, then the transit authority, the publicly subsidized transit authority, is precluded from providing that service.

If that private operator does not have a sufficient number of buses to provide the service that is needed, or does not have equipment that has access for handicapped persons, then that private operator is entitled to lease that type of equipment from the publicly subsidized operator, so that the needs of the community again would be met.

Senator Harkin. In other words he is authorized to lease it from the public transit authority, and the public transit authority then, under your rules, would have to make that available. Is that correct?

Mr. LaSala. No; there is no requirement that the public transit authority would have to make that equipment available.

Senator Harkin. In other words, they can lease it from the public authority, but there is no requirement that the public authority have to make it available. They can say, no, we just are not going to lease it.

Mr. LaSala. They can say, no we can not, or a more likely occurrence to happen is that the private operator will turn to other private operators, either in the region or outside of the region to lease the equipment that is necessary to meet the need.

CHARTER BUS SERVICE IN SMALL AREAS

Senator Harkin. Again, I am saying that it is not unlikely that in many smaller areas, I am not talking about big cities. I am talking about small areas like where I come from, that you have got one public transit authority, and you have got one private carrier.

If you do not allow the public authority to do it you have given in effect a monopoly to the one private carrier. Period.

Mr. LASALA. We had in a number of comments, Senator, concerning smaller rural areas, under 50,000 in population, in which there were no private operators, and the concerns expressed to us during the rulemaking were about how can you prohibit us from charter service when in some of these areas there is no willing and able private operator.

Senator HARKIN. Well, you have taken care of that in the rule.

Mr. LASALA. We have.

Senator HARKIN. That is taken care of.

Mr. LASALA. I do not know of an example yet where someone has come in and said, there is only one private charter operator in the area that is charging monopolistic prices. I would say that that case can apply on the public side as well.

We have fashioned for the smaller rural areas because of those concerns, a process where we can grant a waiver for up to 12 months on an exception basis.

Senator HARKIN. And what you are saying is that the public system can rent to the private system, and then the private system can rent to the purchaser of the service, or whoever it is. Right?

Mr. LASALA. They will run the charter service for whomever is requesting to be transported.

CHARTER BUS RATES

Senator HARKIN. Then, are there any limits on what the private system can mark up?

Mr. LASALA. No; not in the regulation.

Senator HARKIN. So the public system rents to the private system, the private system rents to the purchaser, and they can mark up anything they want.

Mr. LASALA. The market will dictate what the cost of that service will be.

Senator HARKIN. It depends if there is a market, what kind of a market is there. Do you see what I mean? It may be a captive market.

Mr. LASALA. If there is no market, then I do not know that there is an issue. If there is no market for charter service, I do not think we have an issue about the rates.

Senator HARKIN. Sure you do. Again, in the case I am pointing out, where you have one—OK, you understand.

Mr. LASALA. I understand.

CHARTER BUS MILEAGE RESTRICTION

Senator HARKIN. Now getting further into this rule. Let me just ask you again about these regulations. There are a lot of unanswered questions in these regulations.

First, when does the distance from the private carrier's base to the charter point become large enough to be considered unreasonable?

Now, I understand that a specific mileage level can not be stated since a number of factors have to be taken into consideration. But what I would like to do is to have you indicate a range where the distance is likely to be considered excessive and where it will almost certainly be excessive, where the deadhead mileage is being charged.

Mr. LaSala. It is difficult to do, as you point out, and for the reasons that you point out. The first instance for that determination will not be with UMTA. It will be with the public transit authority who wishes to provide that service.

And that transit authority is entitled to come to UMTA and say, there is a private operator in this region but he is *x* number of miles away. It is our belief for the following reasons that to deadhead that bus that far will cause a hardship on the customer. And we would appreciate your considering our request for a waiver in this instance.

What will then happen is that we will allow the private operator in that instance to comment on that request for a waiver, and analyze those comments and make a determination. We have not prescribed in the rule a specified radius, if you will, for when that will kick in.

Mr. Stanley. The goal was to allow that to be determined by the public transit agency, and that if they felt that the deadhead mileage was a hardship we would allow them to declare whether there was a hardship or not and through the exception process get an idea of what the range is going to be.

Senator Harkin. But you are saying that you are going to allow the public carrier to comment on that.

Mr. Stanley. And to actually determine that as well, on a case-by-case basis. First of all, not all of the transit agencies do charter work. Those that do feel that after they published, and asked for willing and able private operators, someone responded that he is *x* number of miles away, they think the deadhead mileage would create a hardship.

We allow them to make the determination if this is a hardship. Then they come to UMTA and say, this is why we have called this a hardship. We would like an exception. That is what we hope as this rule works its way through the system to be able to determine, yes or no, it is a hardship.

Senator Harkin. I am going to follow up on that a little bit later. But again, UMTA has the final word.

Mr. Stanley. Right.

CHARTER BUS REGULATION

Senator Harkin. On any of this. You say that you are allowing the public carrier to make the determination. You are still saying that you could override, that you have the final say.

Mr. LaSala. It is for us to make the determination whether an exemption is granted.

Senator Harkin. Yes; but you are not expressing any opinion right now as to what——

Mr. LaSala. No; again, we were going to rely on the agencies. What we did not do is say we will not have an exception process, and in the course of the regulation we recognize the very problem that you are discussing. We allowed for this exception process specifically, so that this problem would not occur.

Senator HARKIN. Mr. Chairman, I have been very indulgent with time. I have a couple more that I would like to propound. I do not know if you want me to come back.

Senator LAUTENBERG. It is just that Senator Mikulski is here, and says she has a couple of questions.

Senator HARKIN. If I can come back, I would appreciate it. Thank you.

FISCAL YEAR 1988 BUDGET REQUEST FOR WASHINGTON METRO

Senator MIKULSKI. Thank you very much, Mr. Chairman, and Mr. Stanley and members of your team. I am happy to meet you personally. We have certainly via correspondence.

Mr. Chairman, I want to thank you for allowing me to sit with the subcommittee today. I support your work, as you know, for providing urban mass transit.

But I am here specifically today just to focus on a question or two about the Washington Metropolitan Area Transit Authority, which is important not only to Maryland but really to our nation's capital, to provide safe, timely, and efficient transportation.

Mr. Stanley, I am very much concerned about the issue of reprogramming as we work on the appropriation. I would like to ask you a few questions, if you will. This goes to the $130 million request contained in the President's budget. Did UMTA submit a request to OMB for $130 million prior to the time that the PMO completed its analysis of the Washington Metro system?

Mr. STANLEY. The PMO has not completed its analysis. The budget request is based on our best estimate. The PMO works on a constant basis for us and there is no single analysis that is part of it. No.

Senator MIKULSKI. Well, what was UMTA's rationale for recommending $130 million?

Mr. STANLEY. The rationale for $130 million was a recognition, when the full funding contract was signed, that there would be a commitment to fund what WMATA could spend and actually put under contract in a fiscal year in a way that would not disrupt the construction program and remain faithful to the principles in the contract. And the outlay are always the concern in the overall budget in UMTA and how that impacts on the Department's budget.

As you know, Senator, in the prior year we had recommended no funding for the construction program. The $130 million request, which is more than any other city in the country will get for an individual project like that was a recognition on the administration's part of the principles in the full funding contract.

Senator MIKULSKI. WMATA has submitted to you revised cost information by contract basis reflecting the current construction bidding climate. I understand these estimates are fully in compliance with Washington Metro's full funding agreement.

Do you think that these new estimates would prompt you to revise your $130 million estimate?

PMO REVIEW OF WMATA REVISED COST ESTIMATES

Mr. STANLEY. For this year, no. In fact the estimates which both UMTA and the project management oversight team, Senator, are still reviewing, reinforce the adequacy of the $130 million request.

What we are doing is asking ourselves how much the Washington transit authority can spend in a fiscal year to keep its construction program ongoing. I would say that there is a considerable amount of money that is not yet under contract.

Not through the fault of the agency, but as we indicated earlier, what we are trying to do is make sure that what is appropriated gets spent as quickly as possible. Given what we understand their construction schedule to be, the $130 million is perfectly adequate to maintain that construction schedule on an orderly basis.

Senator LAUTENBERG. If I might advise the Senator, we are shortly going to be hearing from Mrs. Turner. Mr. Stanley and Mrs. Turner will be at the witness table at the same time to discuss Washington Metro, so that you will have an opportunity then.

Senator MIKULSKI. Well, thank you very much, and Mr. Chairman, I had no further questions of the witness. The rest then would be then engaged with conversation with Mrs. Turner.

Senator LAUTENBERG. Senator Harkin, you wanted to return.

CHARTER BUS—EFFECT OF GROUP SIZE

Senator HARKIN. Thank you very much, Mr. Chairman. Mr. Stanley, two other things. I would appreciate your explaining in some detail, if you can, your views on when availability of equipment may be unsuitable for a particular route because of the size of the group under the charter regulation.

For example, if only regular full-size buses were available, and the group requiring the charter contained let us say 15 people, would the full-size bus be suitable under the rule if a public transit authorization had smaller buses that could be used for this?

Mr. STANLEY. That question is one of the exceptions that we have, which distinguishes charter service, with full buses from charter service by vans. What we have said is that if a private operator has only the full-size buses to operate, we would not consider him to be willing and able if the service sought were for van service for a group of 15 or for a smaller group. We would not require or deem that private operator to be willing and able in the event the only vehicles were of a capacity in excess of what was needed.

CHARTER BUS SURVEY—DES MOINES, IA

Senator HARKIN. Now last, Mr. Stanley, I am going to tell you I am just a little disturbed at some recent events that happened with the Des Moines Metropolitan Transit Authority in Iowa.

On Friday, April 24, at approximately 3 p.m., the office in Des Moines was notified by the UMTA regional office in Kansas City that they were being visited on Monday, April 27. They were called Friday at 3 p.m., told they were going to be visited next Monday, April 27, by a representative of Barry Goodman and Associates.

They said the purpose of the visit was to investigate their charter operations. I am told they did not give any more information than that, but that they would be receiving a hand-delivered letter on Monday morning providing details.

The head of the metropolitan transit authority, the general manager, Mr. Spade, said that since he could not get any information he said he would contact UMTA headquarters in Washington. Specifically the Office of Budget and Policy, and a conversation with a Mr. Mexic. Is he at this table?

Mr. STANLEY. No; he is not.

Mr. BUTLER. He works in my office.

Senator HARKIN. He said it was necessary for him to be there. He said he was going to be out of town on Monday and Tuesday. He said they requested that he come on Wednesday. He said they were informed that plans were made for Monday. And they could not change those plans. So Mr. Spade changed his plans to be there.

He said he asked the purpose of the investigation, they said they wanted to look at the charter logs because they had heard that 50 percent of the transit system's revenue was generated by charters. Mr. Stanley, what I would like to have you do is please provide in writing to this subcommittee the source of where you heard that 50 percent of the revenues of the Des Moines Metropolitan Transit Authority were coming from charters.

If you can do that. I know you cannot answer that question right now.

Mr. STANLEY. OK.

[The information follows:]

UMTA staff was not under the impression that "50 percent of the transit system's revenues was generated by charters." UMTA's data suggests that the MTA's charter revenue is an insignificant percentage of its operating budget.

Senator HARKIN. But whatever you can provide of where you may have picked up rumors like that.

Mr. STANLEY. I will try to provide it. First, I apologize for our short notice to Mr. Spade. I have never heard that. There is only about 3 to 4 percent of the revenues, as I understand, in Des Moines that come from charter operations.

Senator HARKIN. Exactly.

Mr. STANLEY. We are dead wrong, and I am very, very sorry that even the term investigation is used. Mr. Goodman is doing nothing other than visiting some transit authorities to try and give us a survey of charter operations in terms of cost allocation.

And I apologize to you and Mr. Spade, whom I have talked to on the phone on occasion, for any inconvenience we might have caused, or misunderstanding about the revenues, because that is dead wrong.

Senator HARKIN. I appreciate the apology. But before you apologize too soon, let me finish. No use apologizing twice.

He said they told the Barry Goodman Associates that they would need time to prepare for it. They said, no, they had to come on Monday. Well, so what happened is that Mr. Spade assembled his staff, they all waited on Monday, all day, only to find out that the representative did not show up until Tuesday. They were never even given the courtesy of a phone call to inform them that they need not be around or that they could have more time to prepare the visit on Tuesday.

Finally, Mr. Spade tells me that the representative of Barry Goodman went far afield from the topic of charter costs, they delved into privatization, their demonstration project on privatization, and she even went so far as to ask numerous questions about the transit mall.

Again, Mr. Spade's correspondence to me as saying that they are not concerned about the fact that questions were asked or that they went far afield or the visit or anything like that. But that they were called at 3 p.m. on Friday, said that they would be there first thing Monday morning.

Then they had to assemble their staff and then they had to wait all day Monday, were not even given the courtesy of a phone call to say that, no, I am sorry we cannot be there today, we will be there tomorrow.

I would like to know who told Barry Goodman and Associates that they were to go to Des Moines to conduct this cursory and very hurried-up investigation at that point in time.

Mr. STANLEY. Mr. Butler?

Mr. BUTLER. Mr. Harkin, I do not think on the last point that an apology would be appropriate.

Senator HARKIN. On what?

Mr. BUTLER. In regards to the notice to the transit authority on the team from Barry Goodman Associates being in town. They were asked in advance as in all of the study areas of which Des Moines is one of the last three cities that is being visited in a 12-city study, by Barry Goodman and Associates.

It is common practice that before going to visit the transit authority to ask for information which was delivered to the place where Barry Goodman Associates was in Des Moines. They looked at the information beginning midday on Monday and Mr. Spade was notified of this process.

I do not know where this misinformation is coming from. If there was an inconvenience upon the transit authority, I think at that point we should apologize. But this is normal procedure.

Senator HARKIN. Is this normal procedure, to call them up at 3 p.m. on Friday and say we will be there Monday morning? Is that just normal?

Mr. BUTLER. Well, sir, I would have to say that such short notice is not appropriate for a study of this type, and that is what we would apologize for.

Senator LAUTENBERG. We will be checking into Barry Goodman and Associates this afternoon. It is not normal.

Senator HARKIN. I would like to know why that kind of event happened and then why on Monday they were then told they would be in on Tuesday.

Mr. BUTLER. Yes, sir; and we would be glad to provide for the record all of the information from the study to you personally.

[The information follows:]

My office spoke with Mr. Spade on Friday afternoon and advised him that we would like to send Barry Goodman Associates to Des Moines to evaluate their operations on Monday. By the time my office had concluded their conversation with Mr. Spade, Barry Goodman Associates had closed for the afternoon. On Monday morning, we spoke with Barry Goodman Associates and they immediately contacted the MTA to schedule a Tuesday appointment. It is my understanding that because of this phone conversation, the MTA delivered some information to the hotel where the representative from Barry Goodman Associates was staying on Monday evening. I therefore find it difficult to understand why the MTA is claiming that they were not aware that the site visit was scheduled for Tuesday.

DES MOINES—CHARTER BUS LOGS

Senator LAUTENBERG. If I might ask a question, since I come from the accounting field. How can they possibly have the records available for you that you need? I assume you are looking at records that have been committed to storage, et cetera.

Mr. BUTLER. Mr. Chairman, charter logs are supposed to be fairly readily available. The purpose of the study was to look into the charter operations, as a normal practice of this study. These other areas that are alleged are not part of that, and if Barry Goodman Associates got into that area, that was totally inappropriate for the scope of this study.

We will provide the scope, we will provide all the information from all of these nine cities that have been visited so far, so that you have that for the record and for your perusal.

Senator HARKIN. Did all the other cities get the same kind of notice?

Mr. BUTLER. I hope not. I really do.

Senator HARKIN. I just wonder why. Why was this done at that point in time. Why could they not say, well, we will be there next week, we will be there next Thursday. Get your records together, we will set up an orderly procedure for this. Why was it 3 p.m. on Friday, get there Monday morning, why all this——

Mr. STANLEY. Senator, we will attempt to find out the answer to that, but let me just assure you that the general practice, when there is a study going on, is for us to work through our regional offices. We generally would tell those properties that are within the scope of the study, far in advance, and tell them that they can expect a kind of preentry conference.

I mean this would be coordinated. I am at a loss to explain how this did not happen in this case. But I can tell you that generally, our procedure is to give people early warning so they can do exactly as the chairman has suggested, get the documents together, know what to expect, have it ready, and whoever is doing it can arrive and carry out their work.

That obviously did not happen in this case. We do not know why but we will find out and report back to you. It should not happen.

[The information follows:]

The decision to send Barry Goodman Associates to Des Moines was made by Mr. Kenneth W. Butler, UMTA's Associate Administrator for Budget and Policy. His decision to expedite the review of the MTA was made to ensure that UMTA was prepared to respond to any of Senator Harkin's questions on the MTA, which we understood would be raised at the hearings.

Senator HARKIN. Well, I appreciate that. Now I would like to find out who gave the directive to Barry Goodman and Associates to do this, to conduct it in that manner, or did they do that internally. Somebody, someone decided——

Mr. DELLIBOVI. I would think, Senator, that that was done internally. Nobody I would hope——

Senator HARKIN. Nobody in the Kansas City office or nobody in Washington would have said——

Mr. STANLEY. I would hope not. I mean, we have been in Des Moines on a competitive service project for well over a year.

Senator HARKIN. I guess, was Des Moines always one of the cities in the study?

Mr. BUTLER. Des Moines was always one of the 12 cities, and the study was and will be completed by the end of May. They were scheduled as far back as at least 2 months ago to be on the final list that were randomly selected.

Senator HARKIN. Well, I would like to find out who gave that order, that directive to proceed in that fashion. And if you would submit that or find that out I would appreciate it. Thank you, Mr. Chairman.

Senator LAUTENBERG. Thank you very much, Mr. Stanley and the people from the UMTA organization. We would now ask you to stay where you are and to invite Mrs. Carmen Turner to the witness table.

WMATA WINTERIZATION PROGRAM

Senator HARKIN. Mr. Chairman, I am sorry. If I could, I had one question in my capacity as chairman of the District of Columbia Subcommittee, I had one that I wanted to get for the record if I could.

Mr. Stanley, in mid-March the Washington Metropolitan Area Transit Authority requested a letter of no prejudice from UMTA for $6.75 million in order to proceed with the first phase of the winterization program. We had hearings on that as you know, Mr. Chairman, not too long ago.

Such a letter is critical if equipment acquisition and installation is to be completed in advance of next winter. Since I have been involved in this snow removal thing with the District of Columbia I am interested in what is the delay in granting this letter of no prejudice? It has been now a month and a half, I guess.

Mr. STANLEY. There is not a delay. We have responded to the request, which includes additional funding beyond the $6 million for the winterization program in subsequent years.

We have told the transit authority on repeated occasions that we will make available $5 million for the initial equipment purchase, and the balance of the program that they are committed to will be funded by the transit authority. And that positive response on the letter of no prejudice to that amount should be forthcoming very quickly.

Senator HARKIN. Thank you very much. Thank you, Mr. Chairman.

Senator LAUTENBERG. Thank you.

SUBMITTED QUESTIONS

[The following questions were not asked at the hearing but were submitted for response for the record:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

ADMINISTRATION'S POSITION

SENATOR LAUTENBERG: Now that Congress has reauthorized the UMTA Act for 5 years, what do you see as the long-term role of the Federal Government in the financing of public transit?

ANSWER: The Department sees the Federal Government continuing in its role of providing a basic level of mobility for the transit dependent, in cooperation with state and local governments. However, the Federal Government is not in a position to assist in financing transit projects that go beyond basic mobility needs. The Department believes that the reauthorization legislation indicates the Congress has recognized the need to assure that transit funds, both Federal and non-Federal, are spent wisely. The inclusion of provisions governing the issuance of grants under section 3, which require a finding of cost effectiveness and adequate local funding to build and operate a project before such grants can be issued is illustrative. All citizens realize that Federal funds are limited and that those dollars must be spent wisely. Further, there is greater realization of the potential for the private sector to participate in the financing of transit services.

UMTA OPENING STATEMENT

SENATOR LAUTENBERG: Mr. Stanley, in your prepared statement you state that operating subsidies do not benefit the poor and transit dependent. Were the figures in that study weighed to account for the cost of living differences among the riders studied?

ANSWER: The household income level of $10,000 was used for all locations. That amount was the approximate Federal poverty level for a family of four in 1983.

SENATOR LAUTENBERG: Is a rider making $20,000 a year in New York counted the same as a rider making that amount in a less Urban, a less costly area?

ANSWER: Yes. Even accounting for the cost of living between cities of different size, the share of transit riders with low household incomes tend to decrease with urban area size.

SENATOR LAUTENBERG: If so, don't you believe that not weighing this data to reflect wages relative to the area's cost of living distorts the subsidy per rider argument (especially, since the overwhelming majority of transit riders live in the more costly urban areas)?

ANSWER: There is always the risk of distortion when a national aggregate income level is applied locally. Yet national aggregate numbers are used all the time. For transit, little real distortion results from using the official poverty level across different cities. If, as you suggest, most transit services are in the high cost of living areas of the country, so too are the concentrations of low income residents whose costs-of-living are the basis of the nationwide poverty level.

If the cost of living was accounted for in each city, the proportions in each income category might possibly shift and the percentage of the subsidy flowing to the lowest end of the scale would increase. In those circumstances about 77 percent, or the vast majority, of the subsidy would still flow flow to people above the national poverty level.

But the shift would not be very large because in the larger cities transit tends to attract the more mainstream income groups. The lion's share of subsidies would still flow to individuals who take the longer trips on the more expensive transit express bus and rail modes. Accordingly, there would be no distortion in concluding that subsidizing monopoly transit providers is a very inefficient way in which to extend meaningful urban mobility to low income urban residents.

In the final analyis, how you draw the poverty line to make a statistical argument would not alter the number of people from households with income below $10,000 living in our cities who need better local mobility to participate in regional economic activity.

SENATOR LAUTENBERG: Mr. Stanley, you suggested that the Federal approach to transit should be a return to the basics. What do you believe are the basics of the Federal/local relationship regarding transit?

ANSWER: I believe the Federal/local relationship regarding transit would be a Federal program which assists local areas in maintaining a basic level of transit service without distorting local investment priorities or wasting Federal tax dollars.

Our budget proposal is consistent with such a relationship. A 50 percent Federal share for capital projects, elimination of discretionary capital grants and elimination of Federal operating subsidies for areas over 200,000 population would significantly reduce the distortion of local priorities a reduce waste. The formula program would, nonetheless, easily cover the needs for bus maintenance facilities, rail modernization projects and replacement of existing rolling stock.

RELIANCE ON FEDERAL OPERATING SUBSIDY

SENATOR LAUTENBERG: In the fiscal year 1987 appropriations, operating assistance for cities over 1 million in population was reduced by 5 percent. What has been the effect of this cut?

ANSWER: The effect of this cut has not been particularly significant, since, in urbanized areas with a population of one million or more, UMTA operating assistance makes up only a small portion (5-10%) of their total operating budgets.

SENATOR LAUTENBERG: Has anyone complained to UMTA about the operating assistance cut? If so, who?

ANSWER: UMTA has not received any complaints about the reductions in operating assistance. This may be due to the fact that the cuts were confined to urbanized areas with a population of one million or more, where UMTA operating assistance makes up only a small portion of their total operating budgets. In any case, grantees had no choice but to accept the reductions, since they were legislated by the Congress.

SENATOR LAUTENBERG: The Administration's original proposal called for eliminating operating assistance for cities over 200,000 in population. Why was this level for your cut-off?

ANSWER: The basis for our proposal to retain operating assistance in areas under 200,000 is rooted in our reasons for our opposition to operating assistance in general: 1) it is inappropriate as a Federal role, 2) the negative impacts it has on efficiency and 3) the fact that it is poorly targeted to assist those most dependent on transit. In areas under 200,000, the efficiency problems are less severe and users in these areas tend to be more transit dependent than those in larger areas. Also, because Federal assistance represents a larger share of operating budgets in these areas, its elimination would have been less easily responded to than in areas over 200,000.

The smaller areas have average operating costs well below those in the larger areas. In 1984, average operating costs per vehicle hour were as follows:

Area Size	Cost/Rev. Veh. Hr.
Multimodal Areas, Over 1m	$79.49
Bus Only, Over 1m	55.60
Areas 500,000 to 1m	36.73
Areas 200,000 to 500,000	33.98
Areas Under 200,000	29.87
National Average	62.46

In smaller urbanized areas, transit riders are more likely to be low income persons dependent on transit for a variety of trip purposes. In the larger areas, the large numbers of higher income work trip users of transit mean that operating subsidies tend to go to these more affluent riders.

SENATOR LAUTENBERG: On average, what percent of a locale's transit operating costs are covered by the Federal government: cities over 1 million population; cities between 1 million and 200,000; cities between 200,000 and 50,000; and areas below 50,000?

ANSWER: The following table displays the average percent of total operating costs represented by Federal operating assistance in 1984, by size of urbanized area. On the average, areas under 200,000 had 24.7 percent of their budget come from Federal operating assistance while areas over 200,000 had only 9.2 percent come from the Federal government. Given the increase in operating costs since then and the capping of operating assistance in 1983, these shares would be somewhat lower today.

Area Size	Federal Assistance as Percent of Operating Expenses (1984)
Over 1 million	7.9 %
500,000 to 1 million	20.4 %
200,000 to 500,000	23.8 %
(All Areas Over 200,000)	9.2 %
Areas under 200,000	24.7 %

For example, in 1984, Altoona obtained 42 percent of its $1.37 million budget from Federal operating assistance. Oshkosh got 29 percent of its $1.26 million budget and Reno also 29 percent of its $3.35 million budget.

Similar data is not available for areas under 50,000 because they are not required to report under Section 15.

SENATOR LAUTENBERG: In the budget justification, (page 2) you state that "efficiency improvements and competitive contracting can result in cost savings in excess of 10 percent." Where did you derive this figure? From what studies? Is it really statistically accurate? Ten percent of what? (Percent of Federal subsidy, or total operating costs for all transit authorities?)

ANSWER: At the time we prepared the budget, 10 percent of operating costs was our best conservative estimate of the overall savings possible from a reasonable, phased, program of productvity enhancements and competitive selection of service providers.

However, since then we have continued to research and have received a study by the Rice Center that estimates a possible annual saving well above 10 percent of operating costs after a phased 4-year implementation of actions to reduce absenteeism to the national average for private service industries and to use part-time labor for 20 percent of bus operators (Rice Center, "Application of Productivity Enhancing Actions to Key Cities and the Nation," March 2, 1987).

This research is buttressed by reports on individual cases by Charles River Associates ("A Review of Promising Strategies for Productivity Gains," March 1987) and a study of competitive contracting by Dr. Roger F. Teal of the University of California ("Transit Service Contracting: Experiences and Issues, January 1985). Professor Teal observed that competitive contracting for transit services by itself can produce cost savings per unit of service of 10 to 50 percent.

Naturally, savings vary from system to system and any national estimate is subject to qualifications. For example, savings from competitive services assume that a competitive environment is maintained from year to year. UMTA is continuing research to improve the estimation of savings from productivity improvements.

NEW START CITIES

SENATOR LAUTENBERG: Are there no "new starts" in your opinion worth the investment of Federal funds?

ANSWER: The Administration's argument is not that there are no new starts worthy of Federal investment. The argument is that the availability of Federal funds leads to the development of proposals for new starts that are wasteful and that all too often, these projects receive funding. There are several new starts that have actually resulted in lowering transit ridership, by forcing fare hikes to pay for the new rail project. UMTA is currently working with a number of cities to determine the cost-effectiveness of the projects they propose. It is entirely possible that one or more of those projects may be cost-effective.

SENATOR LAUTENBERG: Does that include transit ways (i.e. - dedicated transit lanes for buses)

ANSWER: It does. Transit ways have been among the most successful transit projects in recent years, because of their flexibility and operating advantages. The Shirley Highway transit way carries more people into Washington during the peak hour than any of the Metrorail lines. Throughout the day, I-66, operated as an HOV facility during rush hours, carries three times as many people as ride Metrorail Orange line. The two facilities cost approximately the same. The XBL lane through the Lincoln Tunnel carries more people into New York during rush hours than does any other trans-Hudson facility. Indeed, the XBL carries nearly one-third of the trans-Hudson rush hour traffic.

SENATOR LAUTENBERG: If the Administration doesn't feel any new start is worth the investment how did some cities receive, by your own definition, favorable ratings a couple of years ago, in the new starts criteria.

ANSWER: The criteria assessed the relative cost-effectiveness of the projects submitted for consideration. Inevitably, some would be rated better than others. However, those criteria do not necessarily indicate that the Federal government should fund all projects receiving a certain score. The amount of Federal assistance applied to individual projects must be decided in terms of the overall context of the budget.

In any event, UMTA has entered into full funding agreements for all the projects that received favorable ratings under the new starts criteria, although Federal share in all cases is below 50 percent, indicating the high level of local support for these projects.

PRIVATIZATION

SENATOR LAUTENBERG: In addition to the administrative appropriations, what other funds have been spent or planned to be spent in FY 1987 on privatization efforts?

ANSWER: UMTA expects to spend approximately $8.5 million in Section 6 training, research and development funds during this fiscal year. Because of the delay in passage of an appropriations bill for FY 1987, Section 8 grant allocations are not yet final, so no firm projections can be made of private sector participation in these expenditures. It is not possible to identify all Section 3 and Section 9 funds that go to private sector participation, since such grants are not earmarked specifically for such purposes.

There is abundant evidence, however, that local transit authorities are turning increasingly to public-private partnerships as one solution to the challenges they face. A recent Rice Center survey indicates that $237 million is currently being spent by the transit industry on competitive contracting.

SENATOR LAUTENBERG: What amount is budgeted for privatization efforts in FY 1988?

ANSWER: At this time, the 1988 budget has not yet been approved. However, we expect our efforts to be roughly at the same level as in FY 1987.

SENATOR LAUTENBERG: What are the major obstacles or reasons that public agencies have not gone forward to capture these savings? (Please elaborate)

ANSWER: Originally there did seem to be some confusion and resistance among the public operators and labor unions concerning UMTA's "privatization" efforts.

There was a reluctance on the part of transit authorities and organized labor to make any change from their previously established business routine. Also, they seemed to harbor a basic distrust of private operations.

Transit authorities had long enjoyed controlling their own operations and were fearful of relinquishing any of the control by contracting out.

Labor unions view private/competition as a threat even though a significant percentage of private operations are unionized.

As the various entities have become more familiar with the goals of the "privatization" efforts and recognize that lower costs can be realized through competitive contracting without loss of public control, progress is being made toward better cooperation and the transit industry is becoming more supportive.

The growing interest in using private sector resources to solve public transit problems is also seen in the results of a recent Rice Center study. They surveyed 277 MPO's, 374 transit operating agencies, and 50 state agencies. They found that 67% have adopted a policy, 84% have established a process, and 51% have initiated studies directed toward private sector participation. Currently, $237 million of transit operating costs are competitively developed contracts.

ADMINISTRATION'S SUPPLEMENTAL PROPOSAL

SENATOR LAUTENBERG: The Department proposed using $51.8 million of previously appropriated interstate transfer-transit funds to pay for Federal Aviation Administration activities. Was this a Department proposal or one generated at the Office of Management and Budget (OMB)?

ANSWER: The Department proposed transfer of $51.8 million from the unobligated balances of the Interstate Transfer Grants- Transit program to fund mandatory cost increases at the Federal Aviation Administration (FAA). The Interstate Transfer Grants - Transit program is discretionary and can be stretched out without any loss in benefits. The cost increases of the January 1987 pay raise and the increased Federal Employee Retirement System costs at FAA are mandatory administrative costs that must be covered in FY 1987. To help FAA defray these FY 1987 cost increases, the Department proposed the transfer in our supplemental appropriations request in order to minimize the need for additional budget authority in FY 1987.

SENATOR LAUTENBERG: Why did the Department and/or OMB feel that this transfer could be made, (i.e., didn't the Administrator believe that this transfer or funds would hurt the plans/construction schedules of the designated recipients of those funds?)

ANSWER: The funds proposed for transfer were available to these recipients during Fiscal Year 1986. However, they did not have projects ready to utilize these funds at that time. We did not believe that the proposed transfer would hurt any projects. Each recipient would receive an amount equal to their portion of the proposed transfer amount from future appropriations.

SENATOR LAUTENBERG: Did UMTA do an estimate of which withdrawal areas would lose funds under the Administration's proposal? If so, which ones? If not, how would UMTA have chosen which areas were to lose?

ANSWER: The areas which did not obligate these funds in FY 1986 and who would temporarily lose funds are Cleveland ($18,897,953), Duluth, ($800,602), Memphis (3,432,924), Albany ($196,248), Baltimore ($24,806,106), Waterloo ($1,045,965) Portland ($379,465) and San Francisco ($5,413,915).

SENATOR LAUTENBERG: In addition to proposing an alternative use of these interstate transfer funds, the Department proposed the deferral of $4.3 million of research, training and human resource funds. Why did you make this proposal? Aren't these funds necessary for the purposes originally intended? Which categories of Research, Training and Human Resource funds would this deferral affect?

ANSWER: The Department proposed transfer of $4.336 million from the unobligated balances of the Research, Training and Human Resources program to fund mandatory cost increases at the Federal Aviation Administration (FAA), as well as UMTA. The Research, Training and Human Resources program is discretionary. In addition, the development of suitable transit research projects has been difficult and time consuming. Congress recognized this fact in FY 1986 and reduced UMTA's large unobligated research balance by various transfers. The cost increases of the January 1987 pay raise and the increased Federal Employee Retirement System (FERS) costs at UMTA and FAA are mandatory administrative costs that must be covered in FY 1987. To help UMTA and FAA defray these FY 1987 cost increases, the Department proposed the transfer in our supplemental appropriations request in order to minimize the need for additional budget authority in FY 1987. A transfer of $336,000 from UMTA's Research, Training and Human Resources account to UMTA's Administrative Expenses account was proposed to cover the increased costs associated with FERS; the remaining $4 million was proposed for transfer to FAA.

We plan to minimize the affect of the deferral on any one research area by making a proportional reduction in the competition and public sector entrepreneurship, financial reform and new policy trend program areas; the policy research activities and the civil rights technical support activities.

SENATOR LAUTENBERG: The Comptroller General on April 1, 1987 found this deferral, (along with 24 other deferrals) to be "...not in accordance with existing law". What have you done with these funds since the Comptroller General's decision?

ANSWER: The funds deferred by the Department of Transportation will remain deferred, pending action by the Congress.

PROJECT MANAGEMENT OVERSIGHT

SENATOR LAUTENBERG: What has UMTA learned from Project Management Oversight?

ANSWER: We have just begun the PMO activities, therefore are still in a rapid growth period with respect to specific lessons learned. However, we are now able to cover the full range of our project concerns, in particular quality assurance and quality control of construction in addition to budget control and schedule adherence. So far, the concept of contractor support seems viable, though we have to be alert to conflict of interest issues in task order assignments.

In general, we have learned that the PMO program benefits all concerned. That is, it directly benefits UMTA because it enables us to perform our mission more effectively, it benefits grantees by giving them an independent expert assessment on how their project is working and it benefits taxpayers by helping to reduce project delays and cost overruns.

SENATOR LAUTENBERG: Are there any changes that you would propose for the oversight approach?

ANSWER: At this time I would not propose any changes to the PMO approach.

SENATOR LAUTENBERG: How would you respond to allegations that PMO is just another layer of management?

ANSWER: I would say that the allegations are false. PMO contractors are simply an extension of UMTA's staff. They are performing the functions we would do in-house if we had the resources.

SENATOR LAUTENBERG: In UMTA's experience, has the Project Management Oversight process been applicable (as envisioned) on all projects it has been employed?

ANSWER: Yes.

SENATOR LAUTENBERG: Are there other types of UMTA activities which could benefit from Project Management Oversight (e.g. capital procurements other than construction)?

ANSWER: Possibly, in the future we may explore other potential applications.

SENATOR LAUTENBERG: Generally, what are the criteria for successful application of the Project Management Oversight process?

ANSWER: Criteria for successful application of PMO is open and honest communications among grantee, PMO consultant and UMTA.

SENATOR LAUTENBERG: In your opinion, is this concept applicable to other modal administrations within the Department of Transportation?

ANSWER: I would support looking into this question. However, there are major differences among DOT agencies both in the type of programs they deliver as well as in staffing and organizational structure in general. UMTA has benefitted greatly from the PMO program since we maintain a very small staff, especially technical staff, in relation to the size and complexity of our grant program. This was highlighted in a 1983 Transportation System Center Study which indicated that the ratio of the dollar value for UMTA's capital projects to technical (engineering) managers is extremely large as compared to FHWA and FAA. Specifically, the average project portfolio of active projects for an UMTA regional engineer is $340 million compared to $50 million and $20 million for FHWA and FAA respectively.

RAIL MODERNIZATION STUDY

SENATOR LAUTENBERG: What has UMTA learned from the Rail Modernization Study?

ANSWER: The results indicate the need to examine closely the cost-effectiveness and prioritization of Rail Modernization projects as is attempted for New Starts. In terms of the number of passenger-miles served per dollar of restoration costs, the best segment has a cost-effectiveness ratio 7300 times that of the least cost-effective. This is consistent with a recent report by the Regional Plan Association of New York which proposed ending service on a number of very poorly used segments.

This is highlighted by the finding that the most cost-effective segments, which serve 85 percent of passenger miles, can be restored to good condition for about $9 billion (in 1983 dollars), or one-half of the total ten year cost of $17.8 billion (in 1983 dollars) of restoring all segments.

Estimates of restoring all segments must be viewed extremely carefully since they do not account for the cost-effectiveness of making the suggested improvements, nor do they assess alternatives to the rehabilitation of these rail systems, given current funding realities.

Only when the issue of cost-effectiveness is included will we have a complete, professional analysis which can adequately respond to the congressional direction.

These findings provide clear support for the view that reductions in funding levels would not have a significant impact, if any, on cost-effective rail modernization activities.

SENATOR LAUTENBERG: Given the product of this study, do you see a need for similar type of study on the bus category and the bus needs of this country?

ANSWER: No. Such a study is not necessary given that existing information, particularly from the Section 15 reports, is adequate to answer most similar questions about bus costs. For example, data on the fleet inventory by age and vehicle type, together with figures on maximum service requirements, is adequate to determine the annual number of buses required to maintain an appropriate average fleet age for buses needed to operate scheduled service.

We have recently completed such an analysis, using preliminary 1985 Section 15 data, which indicated that, the national total of motor buses required to operate maximum scheduled service is about 38,500. Using UMTA's 20 percent spare ratio guideline, another 7,500 spare buses are required for a total of about 46,000. Assuming an average age at retirement of 15 years, the annual bus replacement requirement is about 3,000. Using UMTA's 12 year useful life guideline to estimate the replacement schedule, annual bus replacement requirements would be about 3,800.

Assessment of the distribution of vehicle ages indicates that of the national bus fleet of over 53,000, over 41,000 are less than twelve years old. Given that the total fleet should be about 46,000 (to operate peak service with a reasonable number of spares), this indicates that only 5,000 buses might be considered to be "overage." However, APTA reports that almost 2,700 buses have had major rehabilitation. Thus, the actual number of "overage" buses is only about 2,300, or about six months of a "backlog" in bus replacement.

Section 15 data is not quite as detailed when it comes to bus maintenance facilities. However, recent experience indicates that spending on bus capital costs other than vehicles in most years approximately equals spending on vehicle replacements.

SENATOR LAUTENBERG: Were any of the components (e.g., bridges, elevated railways, track or automated controls) in such bad shape that safety was being jeopardized?

ANSWER: On a small number of occasions, inspectors for the contractor did uncover problems which required immediate attention. In such cases, these problems were referred directly to the transit operators and corrective measures were taken.

TRANSIT SAFETY ISSUES

SENATOR LAUTENBERG: What regulatory requirements has UMTA instituted for the safe operation of rapid rail transit systems?

ANSWER: UMTA has no statutory authority to regulate the operations of its grantees. UMTA's authority pertaining to safety is limited to the investigation of unsafe conditions, as specifically authorized under Section 22, and the provision of technical assistance and training.

SENATOR LAUTENBERG: What is UMTA's viewpoint regarding the States establishing safety oversight responsibilities for rapid rail systems?

ANSWER: UMTA supports the States in establishing safety oversight for public transit systems (both bus and rail). To date, New York and Florida have enacted legislation for safety oversight of all providers of public transportation within their respective states. In addition UMTA has already provided technical assistance to the State agencies in training, development of system safety program plan guidelines, and evaluation of fire safety characteristics, and UMTA is planning to provide assistance in the development and field-testing of system safety program compliance audit procedures.

SENATOR LAUTENBERG: Has UMTA ever suspended Federal grants to a transit authority because of what it considers to be an "unsafe situation or operating practice" at the authority?

ANSWER: UMTA has suspended funding on the 63rd Street tunnel in New York because of concerns about construction and safety related problems. Funding will be resumed when there is assurance that a ventilation system is in place that could adequately serve in the event of a fire in the tunnel.

PRIVATIZATION

SENATOR LAUTENBERG: List the offices, number of personnel, and costs associated with UMTA's privatization efforts under administrative appropriations; research, training and human resources appropriations; and under the planning appropriations.

ANSWER: The only personnel and costs that can be ascribed directly to UMTA's privatization efforts are those in the Office of Private Sector Initiatives, plus two private sector specialists who assist communities in the development of private sector projects, and one professional in the Office of Technical Assistance. The administrative cost for these personnel is approximately $400,000 per year, most of which is salaries.

SENATOR LAUTENBERG: List the contracts let and amount of each contract let for privatization work. Briefly describe the contract's scope and expected product including duration of contract with expiration date.

ANSWER: The following are Privatization Grant and Procurement Contracts that have been let in FY 86/87 by Urban Mass Transportation Administration:

The Privatization Council, Inc. Project No. NY-06-0137. Grant amount $98,500. To assist the Privatization Council in preparation of its 2nd National Conference on Privatization. To reach and inform the public of the advantage of privatization of mass transit. This project will be completed 9 months after awarded.

Foundation of State Legislatures. Project No. CO-06-0018. Grant amount $9,995. To assist the Foundation of State Legislators to produce an educational booklet that will inform legislatures about the advantages of privatization and that will suggest to them the analytical tools needed to evaluate proposals from the private sector to provide public transit. This publication along with a video will be disseminated to state legislators and their executive staff. This project will be completed within 2 months of grant award.

United Bus Operators Association (UBOA). Project No. DC-06-0126. Grant amount $92,135. To conduct workshops/seminars and provide technical assistance to private operators to encourage their participation and to stimulate greater competition in the 8 demonstration cities. - 1 year duration.

Southern California Transit Action Committee (SCTAC). Project No. CA--06-0222. Grant amount $98,700. To assist SCTAC structure a public information program that will build public awareness for the improvement of transportation in Los Angeles, Orange, San Bernardino, Riverside, Imperial and Ventura Counties. The focus of this particular element of effort will be on the advantages that the public sector can gain by increasing the participation of the private providers in the provisions of public transportation. This effort is to promote competition by private providers as a means of providing public transit services. This project will be completed within 15 months after awarded.

City of Des Moines. Project No. IA-06-0006. Amount $35,000.00. To demonstrate the potential, procedures and problems of regional public transit agencies undertaking to contract out all or a major part of their transit operations.

Seattle Metro. Project No. WA-06-0029. Amount $271,000. A demonstration of the benefits of a transportaion management organization in a suburban central business district, Bellevue.

Regional Transit Authority, St. Paul. Project No. MN-06-0019. Amount $350,000. To demonstrate the potential, procedures and problems of regional public transit agencies undertaking to contract out all or a major part of their transit operations.

Charles Rivers Associates, Inc. Project No. MA-06-0174. Amount $100,000. To evaluate the "Freedom Routes" project, a demonstration of public-private cooperation in transportation, being conducted by the Community Life Services, Inc. of Washinton, D.C. and to evaluate the "Indiana Specialized Volunteer Van Transportation" demonstration. Nine months project.

TRAAC. Project No. VA-06-0124. Amount $2,000.000. Public/Private Transportation Network. To provide technical assistance to both public and private secots in pursuing private sector initiatives. To provide assistance by experts and peers successfully implementing private sector activities in local communities. Project for 1986 and 1987.

Crain & Associates. Project No. CA-06-0219. Amount $50,000.To provide technical support for the Competitive Services Board. To facilitate activties of the various members of the Board.

Comsis. Project No. MD-06-0121. Amount $29,000. To examine intercity bus service in Colorado and to determine ways to maintain this privately operated service. Three months project.

Homitz Allen. Project No. CA-06-0202. Amount $125,000. To provide support services to UMTA's Private Sector Conferences.

Hope Associates. Project No. DC-06-0518. Amount $94,951. To develop demonstrations using volunteers and private sector in providing transportation for elderly and handicapped.

Guilford County. Project No. NC-06-0009. Amount $90,000. To develop demonstrations of volunteer neighborhood van transportation.

Voorhees College. Project No. SC-06-0003. Amount $84,943. To assess transportation related opportunities for private sector in rural South Carolina.

Tahoe Tomorrow Foundation. Project No. NV-06-0008. Amount $58,000. To conduct a study to determine whether it is possible for the private sector to fiance and operate bus service in Lake Tahoe.

University of Tennessee. Project No. TN-06-0015. Amount $71,992. To conduct a feasibility study on deregulation of the urban mass transportation industry.

Pacific Institute. Project No. CA-26-0218. Grant Amount $16,380. To purchase and distribute 2,000 copies of *Urban Transit*, a book on the current influence and role of the private sector in meeting future public transit needs.

Council of State Governments. Project No. DC-06-0524. Grant Amount $43,000. To assist Council to hold three workshops for state legislators on private sector initiatives in mass transit.

American Enterprise Institute. Project No. DC-06-0523. Grant amount $99,849. To assist AEI to reach public and private decisionmakers on how to improve involvement of private sector in public transit to improve public mobility and reduce costs.

American Bus Association. Project No. DC-06-0537. Grant amount $99,000. To assist ABA to familiarize private bus providers with the public planning and decisionmaking process so they can provide effective and competitive services to localities interested in reducing cost and improving local transit.

International Taxicab Association. Project No. MD-06-0123. Grant amount $88,134. To assist the ITA in preparing and conducting a series of workshop conferences on effective ways for contracting services.

University of California. Project No. CA-06-0220. Grant amount $76,613. To assist the University of California in their study to calculate the savings major urban areas can realize by turning to competitive provider services.

U.S. Conference of Mayors. Project No. DC-06-0533. Grant amount $80,380. To develop a transit handbook to study new directions for financing transit capital investments and to develop private handbook for mayors.

Urban Land Institute. Project No. DC-06-0535. Grant amount $90,000. To assist Urban Land Institute in its project to conduct a conference to address the impact of public transportation on land use and community developments.

California Bus Association. Project No. CA-06-0221. Grant amount $60,450. To assist the California Bus Association in the gathering of information in order to develop and maintain a data base of public transit interests in California and to develop a quarterly newsletter on private enterprise participation. Expected date of completion 90 days after obligation date.

City of San Juan. Project No. PR-06-0303. Grant amount $25,000. To assist the city of San Juan in the development of a workshop on "Private/Public Partnerships: the Role of Publicos (Jitneys) and other Private Operators in Urban Transportation" as part of the Great Americas Cities Conference in San Juan, June 18, 1986.

Market Opinion Research. Project No. DC-06-0551. Grant amount $4,900. To purchase the polling data on public attitudes toward greater private sector involvement in mass transit.

International Taxicab Association (ITA) and University of North Carolina. Project No. MD-06-0126. Grant amount $95,354. To conduct an analysis of the state of the taxi and paratransit industry. - 10 months duration.

California Bus Association. Project No. CA-06-0126. Grant amount $67,500. To provide technical assistance to public bodies and private operators interested in awarding competitive contracts for public transit services in California. - 8 months duration.

University of Pennsylvania. Project No. PA-06-0107. Grant amount $99,960. To calculate the savings possible by 2 public agencies (Philadelphia and Boston) if evening, holiday, and week-end services were contracted to private operators. Due December, 1987.

National Association of Neighborhoods. Project No. DC-06-0563. Grant amount $99,800. To conduct a consumer outreach program to reach transit dependents such as handicapped and disadvantaged inner city minorities concerning the effectiveness of transit in meeting their current needs and the potential for private sector strategies to help identify needs.

Ecoplan International. Grant amount $48,800. To analyze the degree of competition to provide public transit in developed countries around the world. To identify lessons learned and their applicability to the United States.

LTI Consultants, Inc. Grant amount $24,000. To provide an analysis of transit deregulation in the United Kingdom.

University of California. Grant amount $98,000. To study the specific savings possible in several U.S. cities (about 25) if various percentages of their services were contracted to private operators through a competitive procurement process.

International Downtown Association. Project No. DC-06-0546. Grant amount $63,792. To assist IDA in undertaking a demonstration program establishing a local process involving public/private partnership interests in developing local transit capital investment strategies. Project to be completed 7 months after award date.

Rural America Incorporated. Project No. DC-86-0550. Grant amount $10,000. To assist Rural America's project to foster and stimulate improved communications between key UMTA personnel and the transportation providers for rural communities (public, private-not for profit, private for private) regarding UMTA policies and programs.

Urban Land Institute. Grant Amount $250,000. Five prototype projects will be conducted to assess potential public/private partenerships to identify and address local problems of mobility at urban activity centers. Start March 1987, Complete September 1988.

Rice Center. Grant Amount $1,633,000. A range of activities on private involvement in transit service provision and transit finance: information gathering, collective and dissemination through publications such as Private Sector Briefs, reports on private financing alternatives and study of various related issues. 18 month duration.

Rideshare Company. Project No. CT-06-0018. Amount $90,373. To provide financial assistance for expansion of their ridesharing publication describing other options for work commute trips which will be distributed to approximately 80,000 individuals each month. A twelve month project awarded 10/86.

Urban Institute. Project No. DC-06-0489. Amount $34,323. (Part of multiple competitive award.) To provide technical support to user groups to facilitate a better understanding of the views and concerns about competition among providers in both the public and private sectors. Part of a two year project.

Urban Institute. Project No. DC-06-0490. Amount $458,341. (Part of multiple competitive award.) To provide technical assistance to three cities for the demonstration of fully competitive transit services, to assist in selecting additional areas for competitive service deomonstrations, and contine to monitor the experience in other countries with fully competitive transit service. Part of a two year project.

Urban Institute. Project No. DC-06-0501. Amount $84,000. (Part of multiple competitive award.) To provide technical support for the privitization lead program. Part of a two year project.

Community Family Life Services. Project No. DC-06-0543. Amount $80,625. To provide transportation for D.C. residents to employment sites in the outlying Washington metropolitan area; to locate employers not accessible to mass transit who will hire District residents who are unemployed, homeless or ex-offenders; and to prepare these residents for full-time employment in the suburbs. Twelve month project.

Metroplan, Little Rock. Project No. AR-06-0004. To demonstrate the potential, procedures and problems of regional public transit agencies undertaking to contract out all or a major part of their transit operations.

North Carolina DOT. Project No. NC-06-0009. Amount $87,000. To demonstrate the effectiveness of state level efforts to encourage greater private sector participation in the provision of public transportation services.

Wisconsin Department of Transportation. Project No. WI-06-0008. Cooperative Agreement amount $90,300. To establish an Office of Private Sector Initiatives within the Wisconsin Department of Transportation, which would encourage private sector involvement and provide technical assistance to public agencies and private providers. An 18-month project.

Chester County, Pennsylvania, Office of Human Services. Project No. PA-06-0102. Cooperative Agreement amount $95,000. To generate 8-10 case studies documenting strategies for private sector participation in the provision of transit in rural and small urban areas, and to prepare a final report to be made available for dissemination to other rural and small urban areas to assist them in developing transit and paratransit services. A 12-month project.

Port Authority Trans-Hudson Corporation (PATH). Project No. NY-06-0133. Cooperative Agreement amount $1,500,000. To develop a Private Sector Transit Promotion Center which would identify new sources of financial and other support from the private sector in the Metropolitan New York region, as well as joint transit programs which promote the use of transit. A two-year project.

ADMINISTRATIVE EXPENSES

SENATOR LAUTENBERG: Describe the relocation of six additional administrative personnel - from where to where. Why is this relocation necessary?

ANSWER: UMTA has been seeking to reduce its staffing through attrition. When vacancies occur, an effort is first made to fill from within the agency. In some cases, elgible staff for a particular position are in another geographical location. Based on recent experience, we expect that most of the additional six relocations will involve the transfer of Washington Office personnel to several of UMTA's ten regions.

SENATOR LAUTENBERG: Describe the $586,000 of travel expenses for fiscal year 1987 and the requested $637,000 for fiscal year 1988.

ANSWER: Of the $586,000 in fiscal year 1987 travel, the largest share will be used to cover the costs of site visits. Site visits are where UMTA staff visit the grantees to conduct negotiations, perform triennial reviews and other evaluations, to inspect projects, and oversee operations. The remaining travel is being used to cover the costs of attendance at meetings, conferences, and training courses. The $637,000 requested for fiscal year 1988 will provide funds for a travel program which is essentially identical to the fiscal year 1986. At the end of fiscal year 1986, GSA increased the allowable rates for per deim by about 14 percent. Thus, in fiscal year 1987, although we budgeted about the same level of funding as we did last year, the actual number of trips and their length have been reduced due to the per diem increases. In fiscal year 1988, we are requesting funding that will allow us to undertake a consistent level of travel consistent with that of fiscal year 1986. In fiscal year 1988, we expect that site visits will remain our largest single category of travel.

SENATOR LAUTENBERG: List the members of the executive staff who made more than three trips in fiscal year 1987. Show the number of trips, dates, and reasons for these trips.

ANSWER: The answer is listed by employee on the pages that follow.

NAME	DATES	PURPOSE
Ralph L. Stanley	10/7-8/86	Speech
Administrator	10/16-17/86	Speech
	10/20-21/86	Speech
	10/22-23-86	Meeting
	10/24/86	Speech
	10/26-28/86	Speech
	10/29-30/86	Speech
	11/13-30/86	Conference
	12/1/86	Meeting
	12/3/86	Speech
	12/12-13/86	Speech
	12/28-30/86	Speech
	1/11-13/87	Speech
	1/14-15/87	Meeting
	1/9/87	Meeting
	1/22-23/87	Meeting
	2/2-4/87	Speech
	2/18-19/87	Meeting
	2/23/87	Meeting
	3/11-13/87	Speech
	3/15-16/87	Speech
	3/23/87	Speech
	3/31/87	Speech
	4/8/87	Speech
	4/12-18/87	Speech
	4/23-24/87	Speech
	5/1/87	Meeting
	5/6/87	Speech

TRIPS -- 28

NAME	DATES	PURPOSE
Alfred A. DelliBovi Deputy Administrator	10/1-2/86	Meeting
	10/6-8/86	Conference
	10/12-14/86	Speech
	10/22/86	Meeting
	11/3-6/86	Meeting
	11/12-13/86	Speech
	11/17-21/86	Meeting
	12/2-3/86	Meeting
	12/10-12/86	Meeting
	12/7-8/86	Meeting
	1/9/87	Meeting
	1/20-21/87	Site Visit
	2/17-18/87	Meeting
	3/3-5/87	Meeting
	3/9-13/87	Meeting/Speech
	3/24-26/87	Site Visit
	3/29-30/87	Site Visit
	4/1-2/87	Speech
	4/8-10/87	Site Visit
	4/27-28/87	Meeting
	5/6/87	Speech
TRIPS -- 21		
Joseph A. LaSala Chief Counsel	10/6-7/86	Meeting
	10/22-23/86	Meeting
	11/16-21/86	Conference
	2/5/87	Meeting
	3/31-4/1/87	Meeting
	4/25-28/87	Conference
TRIPS -- 6		
Robert G. Owens Director of Civil Rights	10/3/86	Meeting
	11/12-15/86	Conference
	11/17-20/86	Meeting
	2/4-6/87	Meeting
	2/11-13/87	Meeting
	2/26/87	Meeting
	3/9-10/87	Meeting
	4/7/87	Meeting
	4/24-25/87	Conference
	5/11-12/87	Conference
TRIPS -- 10		
Ivan Scott Acting Director of Public Affairs	11/14-24/86	Conference
	12/12-12/86	Meeting
	12/28-31/86	Meeting
	4/10/87	Meeting
TRIPS -- 4		

NAME	DATES	PURPOSE
Kenneth W. Butler Associate Administrator for Budget and Policy	10/28-29/86	Speech
	11/15-20/86	Speech
	11/3-4/86	Meeting
	10/22-23/86	Meeting
	12/29-30/86	Meeting
	1/18-24/87	Meeting
	2/27-28/87	Speech
	3/5-6/87	Speech
	3/23/87	Speech
TRIPS - 9		
Thomas R. Hunt Associate Administrator for Administration	12/9-11/86	Meeting
	12/19/86	Meeting
	3/15/87	Meeting
	4/26/87	Meeting
TRIPS - 4		

SENATOR LAUTENBERG: Briefly describe how the internal control reviews work.

ANSWER: The internal control process involves two major activities: risk assessments and internal control evaluations. First, the entire agency is segmented into components called assessable units. The vulnerability of each component to fraud, waste, abuse, or misappropriation is then assessed by the responsible manager using an UMTA questionnaire, which is scored "high, medium, or low" based on the numerical score. Then, internal control evaluations are conducted of assessable units that are ranked highest.

The internal control evaluation is a detailed examination of the system of internal controls to determine whether adequate control measures exist to detect or prevent the occurrence of fraud, waste, abuse, or other weaknesses. The methodology prescribed by OMB and the standards prescribed by the General Accounting Office are used in conducting the evaluations. The six steps of an internal control review are:

- Identification of the event cycles.
- Analyses of the general control environment.
- Documentation of the event cycle.
- Evaluation of internal controls within event cycle.
- Testing of the internal controls.
- Written reporting of the results.

SENATOR LAUTENBERG: What is the definition of vulnerability assessment?

ANSWER: A vulnerability assessment is a documented preliminary review by UMTA management of the susceptibility of a particular program, an activity, an organization, or subdivision of the agency to waste, loss, unauthorized use, or misappropriation. The review is performed in accordance with guidance prescribed by the Department of Transportation's Office of Financial Management, and serves to identify the components that need to be subjected to an internal control evaluation.

QUARTERLY GRANT RELEASE PROCESS

SENATOR LAUTENBERG: Describe for the record the results of UMTA's "quarterly" grant release process. Provide data on grant request by quarter, number approved, number denied and the reasons for grant request denial.

ANSWER: Since implementing the new Quarterly Release process in March of FY 1986, UMTA has approved approximately 1000 formula grants. The general consensus among grantees is that the quarterly release process works very well. The following chart provides data on the number of applications submitted, number of applications approved, number of applications deferred and the reasons for the application being deferred for the first two quarters of FY 1987. The most common reason for deferral of an application is failure by the applicant to secure local TIP approval. The other reasons are environmental problems and lack of required grantee self-certification statements.

REASONS FOR GRANT DEFERRAL BY REGION: FY87

Regions	Quarterly Periods	Private Sector	TIP	Civil Rights	Funding Problems	Environ-mental	Eligi-bility	Certifi-cation	Other	Total # of Applic Deferred	Total # of Applic Approved	Total # of Applic Received
	REASONS FOR GRANT DEFERRAL BY REGIONS - 1ST QUARTER FY87											
	Region											
	I	0	0	0	0	0	0	0	0	0		
	II	0	0	0	0	0	0	0	0	0		
	III	0	1	0	1	4	0	3	0	7		
	IV	0	0	0	1	0	0	0	0	1		
	V	0	4	3	3	0	2	1	2	13		
	VI	1	10	2	3	1	1	2	1	13		
	VII	0	0	0	0	0	0	0	0	0		
	VIII	0	0	0	0	0	0	0	0	0		
	IX	0	9	2	3	3	1	1	1	14		
	X	1	1	1	0	1	0	1	0	1		
	Total	2	25	8	11	9	4	8	4	49	106	155

REASONS FOR GRANT DEFERRAL BY REGIONS - 2ND QUARTER FY87

Regions	Quarterly Periods	Private Sector	TIP	Civil Rights	Funding Problems	Environmental	Eligibility	Certification	Other	Total # of Applic Deferred	Total # of Applic Approved	Total # of Applic Received
	Region											
	I	0	0	0	1	0	0	0	0	1	11	12
	II	0	2	0	0	0	0	0	0	2	13	15
	III	1	1	0	2	4	2	4	3	9	12	21
	IV	0	0	0	1	0	0	0	1	2	12	14
	V	0	0	0	0	0	2	0	0	2	25	27
	VI	3	5	0	1	1	0	2	1	13	14	27
	VII	0	0	0	0	0	0	0	0	0	15	15
	VIII	0	0	0	0	0	0	0	0	0	13	13
	IX	0	2	0	3	0	0	0	0	5	30	35
	X	0	0	0	1	1	0	0	1	3	8	11
	Total	4	10	0	9	6	4	6	6	37	153	190

SENATOR LAUTENBERG: What is the average time frame for grant awards in the Section 9 and Section 3 area?

ANSWER: Under the quarterly review process, UMTA in effect guarantees that any complete Section 9 application submitted at the beginning of the quarter will be approved and released by the end of the quarter. Thus the time from application submission to project approval is no more than 90 days.

The only factor which could jeopardize the UMTA guarantee would be a failure by the Department of Labor to issue a 13(c) certification which is a prerequisite to grant approval.

Section 3 grants, being discretionary type grants, are generally more complex and have to be considered in light of the applicant's intended use of already available Section 9 formula grant funds. Therefore, the review and coordination is more involved and time consuming.

In any event, all grants are now released and published in the Federal Register within seven days of the obligation date pursuant to Congressional requirements.

SENATOR LAUTENBERG: Break-out the description by the stages each grant request has to go through under the quarterly review process?

ANSWER: After the cut-off date for the receipt of applications, the UMTA regional offices have approximately 35 working days to review the applications. This review involves a determination whether all statutory and administrative requirements such as planning, civil rights, private sector, environmental, eligibility, and financial capability have been met. The regional offices then provide Headquarters with a listing of the approvable projects. The list is reviewed in Headquarters and coordinated with the appropriate agencies such as the Department of Labor. After Headquarters review, the affected congressional offices are notified of the impending UMTA grant awards. After Congressional notification has been accomplished, the UMTA regional offices are authorized to obligate the projects and transmit the grants to the grantees. As indicated in the response above, the time from application submittal to grant approval and release under UMTA's new quarterly review process is no more than 90 days.

RESEARCH PROJECTS

SENATOR LAUTENBERG: Briefly describe the three and five year research plan.

ANSWER: The Technical Assistance program which was structured in FY 1985, is a multi-year plan which has as its goal to build a program which is more focused, more easily managed, and more responsive to the current needs of the transit industry and the goals of this Administration. As a result, a number of programs have been created which cut across traditional Technical Assistance subactivities to focus emphasis on and coordinate activity in a number of areas: safety and security, competition and public sector entrepreneurship, financial reform, and new transit policy trends. Each program has been designed to provide the greatest return for each dollar spend. These programs aim to increase private sector participation in the provision of transit, reduce the dependence of public transit on Federal Government financing and assistance, return decisionmaking to State and local authorities, improve local financial management, and enhance the safety and security of transit passengers and personnel.

The original 5 year plan for research projected an annual obligation level of approximately $13 million.

SENATOR LAUTENBERG: List projects, length of research, expected products.

ANSWER: The listing that responds to the third question following this one represents a three year list of projects with dates of completion and output. UMTA has not at this time prepared a list of projects for FY1988 or FY1989.

SENATOR LAUTENBERG: Briefly describe the rationale for the existing research projects being chosen and the rationale/criteria to be used for choosing future projects.

ANSWER: In choosing research projects, UMTA's basic tenent is that research should encourage and assist in the maintenance of safe, reliable, and efficient transportation systems and services to meet the needs of the public, in a manner which suppports a greater participation of the private sector, and allows for the return of transit decision making to State and local authorities, Projects are selected which have the greatest potential for maximizing the impact of the limited R&D dollars, and provides near-term, cost effective, practical solutions to the problems currently facing the transit industry. Within this context the focus of UMTA's research projects has been, and will continue to be, in the areas of safety and security, competition and public/private partnerships in the provision and financing of transit, financial reform, new national policy trends, and human resource development and training.

SENATOR LAUTENBERG: Has the National Academy of Sciences ever reviewed the UMTA research plan? If so, what were the results?

ANSWER: In 1985, at UMTA's request, the National Research Council/Transportation Research Board conducted a review of the public transportation research program entitled, "Strategic Transportation Research Study: Urban Public Transportation" (STRS). The study concluded that those research activities directed toward short-term problem solving should be restructured to allow greater participation of local transit operators. It suggested that one-half percent of Sections 9 and 18 funds be set aside annually to fund this short-term, problem-solving research. The American Public Transit Association has established a committee to design implementation and administration plans for such a research program, and to develop a legislative proposal.

SENATOR LAUTENBERG: Briefly describe the outside contracts let to support UMTA's research efforts for fiscal years 1985, 1986 and 1987. Provide contractor's name, project description, amount of contract, length of contract and expected product.

ANSWER: The following is a list of contracts obligated during Fiscal Years 1985, 1986 and 1987.

FY1985 URT PROCREMENT OBLIGATIONS

PERFORMER NAME PROJECT NUMBER	OBLIGATED	PROJECT DESCRIPTION	ESTIMATED COMPLETION	EXPECTED RESULTS
BARKER & ASSOC. TX-06-0048	50.000	DEMONSTRATION EVALUATIONS AND SPECIAL STUDIES (CONTRACT TRANSFERRED FR TSC IN FY84)	COMPLETED	Study of Dallas Transit market segmentation & analysis of L.A. transit financing
BATTELLE IT-06-0322	847.000	BUS & PARATRANSIT TECHNICAL SUPPORT CONTRACT	9/90	Wheelchair Accessibility Guidelines Mehtanol Trainin Program, Methanol Hazards Analysis Methanol Bus Demo. Eval.
BATTELLE IT-06-0190	300.000	ADVANCED SIGNAL SYSTEM ANALYSIS		
CAMBRIDGE SYST.,INC. MA-06-0173	150.000	DEMONSTRATION EVALUATIONS AND SPECIAL STUDIES (CONTRACT TRANSFERRED FR TSC IN FY84)	9/20/87	Conduct risk mgmt. study & prepare manual for transit agency use
CHARLES RIVER ASSOC. MA-06-0174	150.000	DEMONSTRATION EVALUATIONS AND SPECIAL STUDIES (CONTRACT TRANSFERRED FR TSC IN FY84)	8/24/87	Info. on transit productivit improvements and study of labor issues.
DAY & ZIMMERMAN PA-06-0092	94.912	CONSTRUCTION MANAGEMENT OVERSIGHT PROCEDURES	COMPLETED	Report published. Describes procedures to be used by Regional ofcs. in managing PMO contractors. Describes project construction stages.
DYNATREND, INC. MA-06-0175	50.000	DEMONSTRATION EVALUATIONS AND SPECIAL STUDIES (CONTRACT TRANSFERRED FR TSC IN FY84)	8/24/87	Evaluation of Idaho transit projects
ECOSOMETRICS, INC. MD-06-0166	99.978	RURAL TRANSPORTATION PROGRAM SUPPORT	9/30/87	Provide technical assistance for UMTA's rural programs.

PERFORMER NAME PROJECT NUMBER	OBLIGATED	PROJECT DESCRIPTION	ESTIMATED COMPLETION	EXPECTED RESULTS
KENDRICK & CO DC-06-0452	204.638	TARGET MARKETING AND INFORMATION OUTREACH	11/87	Preparation of technical brie on UMTA Demo. projects & provides graphics support
KENDRICK & CO DC-06-0481	110.000	TOC: PRODUCTIVITY PROGRAM/ FINANCIAL FORECASTING COURSE/ UBUCKS FARE/REVENUE MODULE	9/87	provide assistance in developing productivity and financing training courses.
MITRE VA-06-0067	98.873	MAGLEV INDEPENDENT ANALYSIS	CANCELLED/TERMINATED	NO RESULTS
MORRISON-KNUDSEN, INC ID-06-0001	250.000	STRUCTURAL ANALYSIS AND ON-SITE MONITORING OF MDTA METRORAIL CONSTRUCTION AND REPAIRS	9/1/87	Develop course outline and manuals on passenger counting system designs.
MULTIPLICATIONS, INC. MA-06-0172	150.000	DEMONSTRATION EVALUATIONS AND SPECIAL STUDIES (CONTRACT TRANSFERRED FR TSC IN FY84)		
PMM AND COMPANY DC-06-0499	100.000	DEMONSTRATION EVALUATIONS AND SPECIAL STUDIES (CONTRACT TRANSFERRED FR TSC IN FY84)	9/29/87	Analysis of financing plans for various transit systems.
TAI IT-06-0310	937.509	SECTION 15 DATA BASE VALIDATION MAINTENANCE, AND ANNUAL REPORT PRODUCTION	9/30/87	1985 Sec. 15 Data Base and Annual Report
TRAAC VA-06-0102	262.356	MICROCOMUTER APPLICATIONS FOR TRANSIT PRICING POLICY, UTPS SUPER PROCESSOR, FINANCIAL FORECASTING COURSE	7/31/87	Interactive Transit Pricing Evaluation model with user's manual

PERFORMER NAME PROJECT NUMBER	OBLIGATED	PROJECT DESCRIPTION	ESTIMATED COMPLETION	EXPECTED RESULTS
WESTINGHOUSE IT-06-0253	400.000	AC PROPULSION	COMPLETED	Final Report Delivered Summerizing test results and hardware descriptions
WILSON-HILL ASSOC. DC-06-0478	234.000	TECHNICAL SUPPORT TASK ORDER CONTRACT		
*** Total ***	4489.266			

FY1986 URT PROCREMENT OBLIGATIONS

PERFORMER NAME PROJECT NUMBER	OBLIGATED	PROJECT DESCRIPTION	ESTIMATED COMPLETION	EXPECTED RESULTS
BATTELLE IT-06-0190	600.000	ADVANCED SIGNAL SYSTEM ANALYSIS	9/87	- Report on SEPTA Safety Eval. regarding High-speed line safety review. - Report on productivity enhancement thru automation
CAMBRIDGE SYST., INC. MA-06-0173	317.500	PLANNING METHODS ANALYTICAL SERVICES (CONTRACT TRANSFERRED FR TSC IN FY84)	9/20/87	Evaluations of Service Demo. and Technical Support for planning method studies
CAMBRIDGE SYST.,INC. MA-06-0173	55.000	PLANNING METHODS ANALYTICAL SERVICES INCLUDING TRANSIT INSURANCE STUDY (CONTRACT TRANSFERRED FR TSC IN FY84)	9/20/87	Technical Assistance for various planning methodology projects.
CHARLES RIVER ASSOC. MA-06-0174	242.500	PLANNING METHODS ANALYTICAL SERVICES (CONTRACT TRANFERRED FR TSC IN FY84)	8/24/87	Perform economic analysis, transit investment analysis and development of pricing policies.

PERFORMER NAME PROJECT NUMBER	OBLIGATED	PROJECT DESCRIPTION	ESTIMATED COMPLETION	EXPECTED RESULTS
COMPEX CORP. VA-06-0127	1450.000	SECTION 15 DATA BASE MAINTENANCE, DATA VALIDATION, & ANNUAL REPORT PRODUCTION	1/90	1986, 1987 & 1988 Sec. 15 Data Bases and Reports
COMSIS CORP. MD-06-0121	159.662	DEMONSTRATION EVALUATIONS AND SPECIAL STUDIES (CONTRACT TRANSFERRED FROM TSC IN FY85)	9/29/87	Review of Washington area transit financial planning
CRAIN & ASSOCIATES CA-06-0219	112.500	DEMONSTRATION EVALUATIONS AND SPECIAL STUDIES (CONTRACT TO BE TRANS. FR TSC IN FY85)	9/29/87	Studies to encourage higher transit fare prepayment usea analysis of private sector involvement in sevuier provision
DYNATREND IT-06-0213	55.000	PARATRANSIT VEHICLE TECHNICAL SUPPORT AND TESTING	Completed	Project Final Report
DYNATREND, INC. IT-06-0272	25.112	PTV:OPERATOR SUPPORT & EVALUATION	6/87	Final Report on Paratransit Vehicle Demo. in Pittsburgh
DYNATREND, INC. MA-06-0175	220.000	PLANNING METHODS ANALYTICAL SERVICES (CONTRACT TRANSFERRED FR TSC IN FY84)	8/24/87	Provide assistance for application of microcomputers to transit and conduct project evaluations.
BARRETT AIR RESEARCH CA-06-0175	1248.993	AC PROPULSION	9/87	FINAL REPORTS. Summarizing NYCTA Test results and description of hardware.
HOWITZ ALLEN CA-06-0202	125.000	TASK ORDER CONTRACT: SMD INFORMATION DISSEMINATION	9/1/87	Provided support services for UMTA Private Sector Conferenc
HOPE ASSOCIATES DC-06-0518	94.951	DEVELOPMENT OF DEMONSTRATION USING VOLUNTEERS & PRIVATE SECTOR IN PROVIDING TRANSPORTATION FOR E&H		Develop case studies on private organizations that provide transportation for E&H

PERFORMER NAME PROJECT NUMBER	OBLIGATED	PROJECT DESCRIPTION	ESTIMATED COMPLETION	EXPECTED RESULTS
LAW ASSOC. VA-06-0126	69.337	REVIEW & EVALUATION OF SUBSTANCE & ALCOHOL ABUSE PROGRAMS FUNDED BY DOT	7/87	Report summarizing drug and alcohol programs in DOT
LEE WANN & ASSOC. DC-06-0483	249.619	DEVELOPMENT OF VALUE ENGINEERING (VE) GUIDELINES & TRAINING	1/88	Value Engineering Guidelines manual, and training sessions at Regional offices.
MULTIPLICATIONS, INC. MA-06-0172	320.000	PLANNING METHODS ANALYTICAL SERVICES (CONTRACT TRANSFERRED FR TSC IN FY84)	9/1/87	Assist in dev. transit operation planning course, examination of privat sector financing feasibility.
PMM AND COMPANY DC-06-0499	105.000	PLANNING METHODS ANALYTICAL SERVICES (CONTRACT TRANSFERRED FR TSC IN FY84)	9/29/87	Analysis of costs of providing transit service, transit network evaluation, and support for alternative analysis studies.
PMM AND COMPANY DC-06-0499	112.500	DEMONSTRATION EVALUATIONS AND SPECIAL STUDIES (CONTRACT TRANSFERRED FR TSC IN FY84)	9/29/87	same as above
SCIENTIFIC & COMMER. SYS. VA-06-0125	38.862	URBAN BUS SAFETY WORKSHOPS	12/30/87	Report summarizing bus safety issues discussed at a series of 5 Regional workshops.
SOUTH COAST TECHNOLOGY CA-06-0132	30.000	DESIGN & CONSTRUCTION OF PARATRANSIT VEHICLE PROTOTYPE - PHASE I (CONTRACT TERMINATION COSTS - PROJECT IS COMPLETE)	COMPLETED	None. Paid for Termination Cost
TAI IT-06-0310	700.000	SECTION 15 DATA BASE VALIDATION MAINTENANCE, AND ANNUAL REPORT PRODUCTION	9/30/87	1984 Section 15 Report

PERFORMER NAME PROJECT NUMBER	OBLIGATED	PROJECT DESCRIPTION	ESTIMATED COMPLETION	EXPECTED RESULTS
TRAAC VA-06-0124	2000.000	PUBLIC TRANSP. NETWORK (PTN): A PROGRAM DESIGNED TO ENCOURAGE ADOPTION OF BEST PRACTICES THRU PEER-TO-PEER MATCHING	1/89	Network of experts for providing technical assistanc on competitive services and innovative financing
URBAN INSTITUTE DC-06-0489	34.323	TECHNICAL SUPPORT FOR SPECIAL USER GROUPS (PART OF MULTIPLE COMPETITIVE AWARD)	6/87	Monitor and support to Competitive Services Board
URBAN INSTITUTE DC-06-0490	458.341	TECHNICAL SUPPORT FOR. PARATRANSIT (PART OF MULTIPLE COMPETITIVE AWARD)	6/88	Technical support to develop monitor fully competitive service demonstration project
URBAN INSTITUTE DC-06-0501	36.421	TECHNICAL SUPPORT FOR VARIOUS SERVICE AND METHODS PROGRAM SUB-CATEGORIES (PART OF MULTIPLE COMPETITIVE AWARD)	6/88	Technical support to develop gainsharing demonstration projects
WATSON RICE & CO. DC-06-0521	547.683	ASSESSMENT & EVALUATION OF REVENUE LOSSES IN TRANSIT OPERATIONS DUE TO FARE EVASION, INTERNAL THEFT, MISMGT.	1/89 10/88	84, 85, 86 and 87 Compendium Revenue Collection and Control Guidelines
WATSON RICE & CO. DC-06-0525	20.000	SEC 15 TECHNICAL SUPPORT : ADVISORY BOARD MEETING TASK #1 OF SEC. 15 TECH SUPPORT CONTRACT		COMPLETED
WATSON RICE & CO. DC-06-0527	156.334	SECTION 15 TECH SUPPORT: 1) ADVISORY BOARD MTGS. 2) DATA BASE IMPROVEMENT 3) REPORT DEVEL. 4) INFO. DISSEMINATION		COMPLETED
WILSON-HILL ASSOC. DC-06-0478	125.000	TECHNICAL SUPPORT TASK ORDER CONTRACT	COMPLETE	Technical support for UTPS planning system

PERFORMER NAME PROJECT NUMBER	OBLIGATED	PROJECT DESCRIPTION	ESTIMATED COMPLETION	EXPECTED RESULTS
WILSON-HILL ASSOC. DC-06-0478	70.000	TECHNICAL SUPPORT TASK ORDER CONTRACT	COMPLETE	Technical support for UTPS planning system
WILSON-HILL ASSOC. DC-06-0478	185.000	TECHNICAL SUPPORT TASK ORDER CONTRACT	COMPLETE	Technical support for UTPS planning system
*** Total ***				
	9964.638			

FY1987 UMT PROCUREMENT OBLIGATIONS
(TO DATE)

PERFORMER NAME PROJECT NUMBER	OBLIGATED	PROJECT DESCRIPTION	ESTIMATED COMPLETION	EXPECTED RESULTS
BATTELLE MEMORIAL LAB IT-06-0322	30.000	TECHNICAL SUPPORT METHANOL & ENERGY LEAD PROGRAM (INCOMING IAA FROM DOE)	9/90	Provide Information and Analysis of UMTA Methanol and Energy Program to DOE, as requested.
HOWITZ ALLEN CA-06-0202	76.000	TASK ORDER CONTRACT: INFORMATION DISSEMINATION	9/1/86	Develop training session
WATSON RICE & CO. DC-06-0484	50.000	IDENTIFICATION OF TRANSIT AGENCIES HIGHLY RATED IN MAINTENANCE	12/31/87	Methodology using Sec. 15 data to identify transit systems superior maintenance performance
WILSON-HILL ASSOC. DC-06-0478	115.000	TECHNICAL SUPPORT TASK ORDER CONTRACT ('87 FUNDS ARE INCOMING IAA FROM FHWA)	9/30/88	Technical support for UTPS planning system.
*** Total ***				
	271.000			

PLANNING

SENATOR LAUTENBERG: Briefly describe how the Section 8 Planning Funds are distributed.

ANSWER: The Section 8 discretionary program does not have a legislative apportionment requirement but in order to achieve equity in the distribution of program resources, we have administratively apportioned these resources to Metropolitan Planning Organizations and States for several years. The translation of the overall Metropolitan Planning Organizations and State allocations into specific marks is done in Headquarters by an administrative formula based upon population. This method is intended to allocate a greater portion of Section 8 funds to larger areas due to the increased complexity of planning for transportation in larger areas. The State formula distribution uses individual State population as a percentage of total national population to obtain a linear distribution of funds. A minimum allocation is provided in cases where the distribution results in too small an amount of funds for either a Metropolitan Planning Organization or State to effectively utilize. Upward adjustments to the Metropolitan Planning Organization and/or State marks may be made for the funding of supplemental activities from Headquarters retained Special Studies and/or Contingency accounts. In FY 1986, the distribution of Section 8 planning funds was 80 percent to Metropolitan Planning Organizations, 10 percent to States, and 10 percent was retained at headquarters for Special Studies. We are distributing FY 1987 funds similarly.

SENATOR LAUTENBERG: List for the record the recipients of the "discretionary" portion of the Section 8 funds for fiscal years 1985, 1986, and 1987. Provide name, amount of Contract and reason for granting the planning funds.

ANSWER: All Section 8 planning funds are "discretionary". However, we do administratively apportion these resources in order to achieve equity in distribution. Historically, we distributed 80 percent to Metropolitan Planning Organizations, 10 percent to States and retain 10 percent for a "discretionary" Special Studies/Contingency Program. Of this 10 percent, we frequently transfer additional monies to our Regional Accounts for use by Metropolitan Planning Organizations to cover special study needs over and above the regular Metropolitan Planning Organization funding levels. A detailed listing of the remaining projects included in the "discretionary" Special Studies Program for Fiscal Years 1985 - 1987 are as follows:

Section 8 Planning Grants

Study Purpose	Recipient	Amount
	FY 1987	
Operating Cost data	Peat, Marwick, Mitchell	$90,000
Financial Planning Manual	SG Associates	40,000
*Project Management Oversight (PMO)	To Be Awarded	500,000
	FY 1986	
Financial Planning Manual	Multi-Systems	$262,337
*PMO - NYCTA/MTA	Dynatrend	96,000
Rural Transportation Insurance Study	Cambridge	50,000
*PMO - CATS project	Fluor	1,497,580
San Diego/Portland LRT Comparison Study	Kellogg	48,258
*PMO - Sacramento	Hill	497,928
Fourth International E&H Conference	State Department	15,000
Development of a MICRO Database	Rice Center	42,128
Consultant Assistance for Triennial Reviews	Crain	75,000
	FY 1985	
*PMO - Miami Dade Project	Morris Knudson	244,815
*PMO - SEMTA CATS Project	Fluor	995,320
*PMO - Sacramento LRT	Hill International	250,000
*PMO - Buffalo LRT	Amman and Whitney	100,000
Public-Private Study	NARC	150,000
Downtown Business District Financial Participation	IAG - HUD	100,000
Transportation Accounting Consortium	University of Michigan	200,000
Environmental Technical Support	Sue Kaminsky	48,420

*These projects provide independent Project Management Oversight of major capital construction projects for UMTA.

INTERSTATE SUBSTITUTION PROGRAM

SENATOR LAUTENBERG: Provide the cost to complete estimate for the Interstate Substitution Transit Program by area with percentage and absolute dollar amounts each area would receive assuming full appropriation of the $200 million authorized level. (Assume full obligation of the Fiscal Year 1987 level provided to each area, and the one-time $100 million increase mandated in Public Law 100-17.)

ANSWER: The information follows:

ESTIMATED INTERSTATE SUBSTITUTE TRANSIT COST TO COMPLETE BEGINNING FY 1988
AND ESTIMATED APPORTIONMENTS OF $100 MILLION

STATE	WITHDRAWAL AREA	ESTIMATED ADDITIONAL FUNDS REQUIRED TO COMPLETE SUBSTITUTE TRANSIT PROJECTS**	ESTIMATED FY 1987 APPORTIONMENTS, ALLOCATIONS, AND REAPPORTIONMENTS***	ADJUSTED ESTIMATED ADDITIONAL FUNDS REQUIRED TO COMPLETE SUBSTITUTE TRANSIT PROJECTS****	ESTIMATED APPORTIONMENT FACTORS (PERCENT)	FY 1988 PROJECTED FORMULA APPOTIONMENT OF $100 MILLION*****
ARIZONA	Tucson	0	0	0	0.000	0
CALIFORNIA	Sacramento	3,538,517	4,731,885	(1,193,368)	0.000	0
	San Francisco	70,667,221	5,819,755	64,847,466	6.783	6,749,085
COLORADO	Denver	0	0	0	0.000	0
CONNECTICUT	Bolton to Killingly	284,916	53,016	231,900	0.024	23,880
	Hartford-New Britain	14,621,665	2,701,971	11,919,694	1.247	1,240,765
DISTRICT OF COLUMBIA	Washington	4,542,095	840,293	3,701,802	0.387	385,065
GEORGIA	Atlanta	0	0	0	0.000	0
ILLINOIS	Chicago	343,404,412	125,649,349	217,755,063	22.777	22,663,115
INDIANA	Indianapolis	1,149,623	1,253,246	(103,623)	0.000	0
IOWA	Waterloo	11,345,042	934,305	10,410,737	1.089	1,083,555
MARYLAND	Baltimore	237,960,052	19,595,530	218,364,522	22.841	22,726,795
	Bowie to Millersville	0	0	0	0.000	0
	Washington	0	0	0	0.000	0
MASSACHUSETTS	Boston	31,158,277	24,951,478	6,206,799	0.649	645,755
	Fall River to Providence	743,102	137,108	605,994	0.063	62,685
MINNESOTA	Duluth	2,648,708	217,905	2,430,803	0.254	252,730
	Minneapolis-St. Paul	0	0	0	0.000	0
NEBRASKA	Omaha	0	0	0	0.000	0
NEW JERSEY	New York City	0	0	0	0.000	0
	New York City to Trenton	1,884,977	2,085,694	(200,718)	0.000	0
	Philadelphia	0	266,071	(266,071)	0.000	0
NEW YORK	Albany	1,451,332	119,400	1,331,932	0.139	138,305
	New York City	382,905,647	43,006,388	339,899,259	35.553	35,375,235
OHIO	Cleveland	37,139,343	13,406,630	23,732,713	2.482	2,469,590
OREGON	Portland	8,813,164	725,355	8,087,809	0.846	841,770
	Salem	0	0	0	0.000	0
PENNSYLVANIA	Philadelphia	0	0	0	0.000	0
	Pittsburgh	0	0	0	0.000	0
RHODE ISLAND	Rhode Island	29,524,271	5,463,005	24,061,266	2.517	2,504,415
TENNESSEE	Memphis	24,471,007	2,014,875	22,456,132	2.349	2,337,255
VIRGINIA	Washington	0	0	0	0.000	0
	TOTALS	1,208,253,371	253,973,260	954,280,111	100.000	99,500,000

NOTE: FHWA and UMTA are now in the process of preparing a new estimate of the cost to complete substitute highway and transit projects. This is likely to result in substantial changes in the cost to complete for most withdrawal areas. State Governors will be providing new cost estimate information in the latter part of August 1987.

*All amounts are Federal funds.
**Amounts are as shown in Revised Table 4 of House Committee Print 100-6.
***Amounts represent estimated apportionment of 50 percent of $200 million based on factors contained in Revised Table 4 of House Committee Print 100-6, discretionary allocations per House Report 99-976, and current estimate of potential reapportionment of returned fiscal year 1986 funds.
****Negative values indicate amounts estimated to be made available are in excess of the estimated cost to complete substitute transit projects.
*****Negative values were ignored in determining apportionment factors. A reduction of one half of one percent was made for project management oversight.

SENATOR LAUTENBERG: At $200 million a year when will the Interstate Substitute-Transit Program be completed?

ANSWER: With an estimate of the cost to complete beginning in FY 1988 of $954,280,111 it would take 5 years to fund this balance at a rate of $200,000,000 a year.

SENATOR LAUTENBERG: Does UMTA have information on the historical use of Interstate Substitute Funds? (If so provide the Committee by category how these funds have been spent e.g. new start construction, capital purchases rail, capital purchases bus, existing rail extensions.)

ANSWER: The information follows:

Use of Interstate Transfer - Transit Funds
($'s in Million)

Fiscal Year	Bus	Rail Mod	New Starts	Planning	Total
1984	$15.8	$106.2	$87.9	$0.4	$210.3
1985	$44.2	$ 78.8	$109.1	$0.3	$232.4
1986	$11.1	$ 36.8	$196.1	$0.2	$244.2

SECTION 10 - TRAINING PROGRAM

SENATOR LAUTENBERG: Why was the Section 10 training program changed by UMTA without the opportunity for the transit industry to comment?

ANSWER: UMTA has received many comments from the transit industry regarding the programmatic changes in the Section 10 training program. Some of the comments expressed concerns of the short course providers that conducted Section 10 training. The changes in the program will now allow the transit systems to obtain on-site training from many sources, including the traditional providers. All of these comments were evaluated and taken into consideration during the developmental stages of the program redesign.

SENATOR LAUTENBERG: Was the Section 10 program changed without allowing those with expertise who provided the training to have any input or comment?

ANSWER: Former short course providers were all aware of the pending programmatic changes in the Section 10 program, as evidenced by letters UMTA received on the subject. As the development of new initiatives for implementation under Section 10 were being evaluated, consideration was given to the input and comments received from the providers.

SENATOR LAUTENBERG: Why was the Section 10 program changed without consultation or allowing interested members of the Congress to comment?

ANSWER: UMTA's Administrator and members of his staff met with members of Congress in the fall of 1986 to brief them on the re-direction of the Section 10 program.

SENATOR LAUTENBERG: Has the effort by the American Public Transit Association to have a conference on a subject of Section 10 training been ignored?

ANSWER: No. Alfred A. DelliBovi, Deputy Administrator, wrote Jack R. Gilstrap, Executive Vice President, American Public Transit Association (APTA), agreeing to discuss Section 10 at APTA's convenience. As yet, UMTA has not received a request to schedule the meeting.

US Department
of Transportation
Urban Mass
Transportation
Administration

The Deputy Administrator

400 Seventh St., S.W.
Washington, D.C. 20590

APR 23 1987

Mr. Jack R. Gilstrap
Executive Vice President
American Public Transit Association
1225 Connecticut Avenue, N.W.
Washington, D.C. 20036

Dear Jack:

Your letter regarding the Section 10 training program has been referred to me for reply. The Administrator and I appreciate hearing of your concerns and agree that a meeting with the American Public Transit Association (APTA) is appropriate.

I disagree with your assertion that industry was not fully apprised of the actions taken by the Urban Mass Transportation Administration (UMTA). In fact, they are aware of continuing budget reductions and the need to train transit employees more cost-effectively. None of the recommendations and decisions regarding the Section 10 program are significantly outside of existing training opportunities. All of your members are still eligible to participate in the program.

Consistent with the need for budget reductions, we are currently evaluating all of the UMTA Research, Development and Demonstration activities, including Section 10. As stated in our letter to the universities, we do not intend to eliminate the Section 10 Managerial Training Grants Program. In fact, the goal is to maximize the use of the limited resources available for training, including blue-collar training.

While the "short courses" have been a major element of the Section 10 Managerial Training Grants Program for several years, we believe that by implementing comprehensive on-site training programs at the larger transit agencies and allowing the States to meet the needs of small transit operators and providers of specialized or rural transportation services, we can train many more transit employees for each dollar spent. Transit agencies best know their own training needs and we look to them to define the proper mechanisms.

We believe that there is a need for new, imaginative approaches to stimulate and promote managerial and blue-collar training to bring about substantive changes in industry service delivery patterns. Please be assured that we fully support the Section 10 training initiative and will continue to provide the kind of policy and administrative support the program deserves.

UMTA would be pleased to discuss the Section 10 program with APTA staff. If you identify a convenient time, we will be there to address your concerns. I look forward to hearing from you in the very near future.

Sincerely,

Alfred A. DelliBovi

SENATOR LAUTENBERG: Why was the program that involved the Centers for Transit Research and Management Development terminated so abruptly? (Terminated after three years of very limited funding rather than the 5 - 7 years that were originally discussed.)

ANSWER: The UMTA University Centers program was initiated in 1983 using funds available for the Section 11(a) university research and training annual competitive awards program. As a pilot demonstration effort, program implementation plans called for gradual reductions in Federal support over a period of up to 7 years during which time the institutions were to identify other sources of financial assistance to maintain and/or expand Center activities. While there were great expectations that the concept was a viable approach towards stimulating transit research activities within the academic community, no sources of non-Federal funds were identified. On the other hand, continued Federal budget reductions made it impossible to provide even a minimal level of support for the program. Last funded in FY 1986, each of the 9 institutions involved is in the process of completing the activities funded under the terms of the grant award and is effecting an orderly windup of their research and training pursuits.

SENATOR LAUTENBERG: If the Administration disagrees with the concept of direct aid to specific transit systems (e.g., operating and captial grants), what better role could the Federal Government play than the sponsorship of a national, broad based program of research into more efficient management techniques and training to develop transit professionals?

ANSWER: The government does sponsor such programs under Sections 6 and 10 of the Act.

UMTA supports the continuation of the Section 10 Management Training program for the very reason suggested in the question, i.e., to build a skilled cadre of management professionals with the tools necessary to shape a transit industry independent of Federal involvement.

In addition, the Office of Technical Assistance utilizes Section 6 funds to support projects that demonstrate methods and techniques to enhance the productivity of the transit work force, both blue collar and white.

SECTION 22 - SAFETY AUDIT

SENATOR LAUTENBERG: Has UMTA ever suspended Federal funds based upon a safety audit conducted under Section 22?

ANSWER: Yes, but not under the auspices of Section 22 of the UMT Act.

SENATOR LAUTENBERG: How often does UMTA conduct these types of reviews?

ANSWER: The SEPTA Safety evaluation is the first Section 22 action by UMTA.

SENATOR LAUTENBERG: How are they conducted?

ANSWER: The SEPTA Safety Evaluation has been contracted with an outside firm, the Battelle Columbus Laboratories. The Battelle evaluation team is comprised of experienced personnel and experts in high speed rail operations and maintenance who possess the skills necessary to carry out the safety evaluation task.

SENATOR LAUTENBERG: What triggers a Section 22 safety audit?

ANSWER: A Section 22 evaluation would be undertaken if the number and frequency of accidents on a system receiving Federal funds leads the Secretary of Transportation or her designee to believe that a serious hazard of death or injury may exist.

LETTER FROM RALPH L. STANLEY

APR 7 1987

Lewis F. Gould, Jr., Esq.
Chairman of the Board
Southeastern Pennsylvania
Transportation Authority
130 South 9th Street
Philadelphia, Pennsylvania 19107

Dear Mr. Gould:

Secretary Dole and I have become increasingly concerned about the recent series of accidents which have occurred on the Norristown High Speed Rail Line as well as other commuter lines operated by the Southeastern Pennsylvania Transportation Authority (SEPTA). The number and frequency of accidents on these rail lines have raised serious concerns about the safety of the SEPTA rail system, particularly the Norristown line.

A number of governmental agencies have undertaken various reviews and investigations regarding the safety of your rail operations in recent years. The Federal Railroad Administration (FRA) commenced an investigation of your commuter rail operations that was completed in October 1985. The National Transportation Safety Board (NTSB) has investigated the circumstances surrounding two accidents on the Norristown line in the last two years. Senator Specter chaired congressional hearings on the safety of the system in January 1986. Furthermore, it is my understanding that the Pennsylvania State Legislature has decided to undertake an investigation focusing on the safety of the SEPTA system. In addition, you commissioned your own review of the system in 1985, which resulted in essentially a capital needs analysis in the form of the Coleman report.

As you know, SEPTA receives capital and operating assistance from the Urban Mass Transportation Administration (UMTA) under the Urban Mass Transportation Act of 1964, as amended, 49 U.S.C. 1601, et seq. (UMT Act). Section 22 of the UMT Act, 49 U.S.C. 1618, authorizes the Secretary of Transportation to investigate unsafe conditions in transit systems receiving Federal assistance and to ensure that adequate remedial actions are taken to alleviate such conditions.

It appears that conditions exist on the Norristown High Speed Rail Line which create "a serious hazard of death or injury" within the meaning of Section 22. Therefore, at the direction and under the authority of the Secretary of Transportation, I am directing that UMTA commence a safety evaluation of the Norristown line.

Consistent with Section 22, the first step in our evaluation will be "to determine the nature and extent of such conditions and the means which might best be employed to correct or eliminate them." Toward that end, UMTA has formed a safety team with the necessary technical skills to carry out such an evaluation.

A second component of Section 22 is the requirement that the local public body submit a plan for correction of the unsafe condition if our evaluation results in a finding that such a condition does exist. Further, Section 22 authorizes the withholding of further UMTA financial assistance from the local public body until approval and implementation of the remedial plan.

The gravity of this situation demonstrates the need for SEPTA to cooperate fully with the safety team so that the evaluation may be completed as quickly as reasonably possible. While the evaluation is currently being limited to the Norristown line, UMTA reserves the right to expand its scope if additional justifying facts are brought to light.

I want to emphasize that while we are familiar with the purposes and results of the other reviews which have been conducted, our evaluation will have a different focus. Our evaluation will be designed to determine: 1) whether the operations of the Norristown line are being conducted in a manner safe enough to justify their continuance; 2) if not, the need for SEPTA to develop a remedial plan designed to correct the deficiencies; and 3) whether to suspend Federal financial assistance to SEPTA.

To initiate this safety evaluation, we will be in Philadelphia on April 10, 1987, to meet with you and senior management officials who will be expected to work closely with the safety team throughout the course of the evaluation. Please call me on (202) 366-4040 to confirm this date.

We look forward to working with you to reach a satisfactory solution to these problems.

Sincerely,

Ralph Stanley

Ralph L. Stanley

BUS FLEET MANAGEMENT

SENATOR LAUTENBERG: How does UMTA know that its regions and grantees are adhering to the policy guidance on bus rehabilitation and stockpiling?

ANSWER: Policy guidance on both subjects was issued to UMTA regional offices and grantees by page change to UMTA circular 9030.1 on June 17, 1985.

In the case of bus rehabilitation, planned activities become part of the grantees submittal of a program of projects to the respective regional office for Section 9 funding. The grantees plans and requirements are made known and any major anomalies in the request may be settled at that time. The grantee has all latitude in making its own decisions regarding rehabilitation with adherence required only to basic UMTA guidelines on vehicle age, cost effectiveness of the planned activity, and extended useful life of the vehicle to undergo rehabilitation.

Insofar as stockpiling of vehicles is concerned, UMTA policy guidance allows the grantee to establish a contingency fleet with a few stipulations concerning vehicle age, and storage and maintenance requirements. In addition, the grantee is required to furnish a contingency plan at the time of the Transportation Improvement Program and triennial reviews to support the existence of the contingency fleet. Failure to provide such a plan results in the contingency fleet being counted as part of the grantee's active fleet and subject to the 20 percent maximum spare ratio.

SENATOR LAUTENBERG: What impact has the guidance had on new bus purchases and the elimination of excess buses?

ANSWER: That part of the policy guidance relating to the maximum permissable spare ratio of percent for a grantee's fleet has had some effect on both new bus purchases and the elimination of excess buses.

At the time of issuance of the policy guidance on June 17, 1985, there were a number of properties whose spare ratios were well above the 20 percent level. UMTA regions closely reviewed all applications for replacement or additional buses by grantees whose fleets already contained excess vehicles and did not approve new acquisitions in those cases not justified by high existing spare ratios.

As a corollary, in those instances where surveys indicated that the grantee had a fleet spare ratio above 20 percent, barring extenuating circumstances, the UMTA region requested submission of a plan by the grantee to reduce the size of its active fleet. This process is continuing and is resulting in reductions over planned periods to reduce the number of excess buses in the grantee fleets.

SENATOR LAUTENBERG: To what extent has UMTA identified transit systems with excess bus capacity and what progress has been made in having these systems dispose of the excess?

ANSWER: Analysis of preliminary Section 15 data for 1985 indicates that only 32 percent of the properties had spare ratios which met the 20 percent guideline in the Section 9 Circular Page Change. Twenty five percent of the properties had spare ratios in excess of 50 percent and 5 percent of the properties had spare ratios in excess of 100 percent. These reports are for calendar year 1985 and thus represent the situation before the Page Change was announced.

Since that time UMTA has mad significant efforts to deal with this problem. The issue of spare buses is a part of each triennial review. By the end of FY 1987, nearly all grantees will have had their first review completed. When an excess spare ratio is found, grantees are instructed to dispose of the excess vehicles in accordance with Federal regulations.

In addition, grantee spare ratios are assessed at the time of grant approval. Funds for bus replacements are not approved if the Page Change guidelines are not met.

SENATOR LAUTENBERG: To what extent do triennial reviews actually verify transit systems' adherence to federal regulations?

ANSWER: Triennial reviews provide an accurate assessment of grantee compliance with federal regulations and administrative requirements. Most federal requirements are documentable -- i.e., audits, certifications and policies requiring implementing documentation. The triennial review is a reliable mechanism for collecting and examining these documents. We have found that our grantees are in compliance on more than 85 percent of the items examined by the triennial reviews. Regional offices monitor progress on corrective actions.

SENATOR LAUTENBERG: For example, to what extent do the reviews actually verify grantees maintenance practices?

ANSWER: Of the 18 triennial review items, maintenance is perhaps the most difficult to quantify. Although we have some statistical data to review (budgets, road calls, fleet age, etc.) and we require grantees to have a written maintenance plan, we do not assess the effectiveness of maintenance practices. Our review is directed toward assuring that maintenance policies and procedures are in place.

SENATOR LAUTENBERG: What are the costs of and benefits of triennial reviews?

ANSWER: The cost of the triennial review program is modest. The field work is performed with existing staff. We have five professionals and one clerical in headquarters who devote substantial time to administering the program. By using redeployment of personnel, we have been able to conduct the program without increasing staff. Similarly, the cost of triennial review travel is modest because it is generally combined with travel for other grant management activities.

The triennial reviews enhance the management of UMTA's grant programs. Reviews provide a concise assessment of grantee compliance with federal requirements which enable us to direct corrective actions where necessary. By performing the compliance review activities once every three years, the grant application review process is much more efficient. Finally, the triennial review has proven to be an effective tool for communicating federal requirements to our grantees.

SENATOR LAUTENBERG: How will UMTA's regulation on buses used to provide school bus services correct the material weaknesses? What will UMTA do to enforce the regulation?

ANSWER: We think a revision to the current regulation would clarify what is permissible service, thereby making it easier for grantees to comply with the regulatory requirements. In addition, we would establish a streamlined complaint mechanism to assure a timly resolution of complaints.

SENATOR LAUTENBERG: What are the costs associated with these problems and what are the costs of implementing the regulations to correct the problem?

ANSWER: UMTA does not have any detailed cost data on compliance or noncompliance with the school bus regulation. However, any revision to the regulation would have to address the costs and benefits of the proposed changes.

GRANTS MANAGEMENT INFORMATION SYSTEM

SENATOR LAUTENBERG: Why has implementation of GMIS slipped from Fiscal Year 1986 for the first phase and 1987 for the second phase to Fiscal year 1987 and 1988?

ANSWER: In reviewing the GMIS design before final acceptance, UMTA concluded that the design was significantly flawed, to the extent that use of the GMIS would result in excessive delays in response time for users and occasional cases of system gridlock if certain relatively common procedures were performed by more than a few users simultaneously. The design consultant concurred in UMTA's assessment and agreed to redesign at no cost to the government. In addition, in reevaluating the interface between the GMIS and the Financial Management System, UMTA staff recommended a

significant number of design changes to enhance the accuracy of financial data and the reliability of reporting. Both actions, which should result in a superior GMIS, generated a delay of approximately one year. UMTA, in addition, has developed a rigorous and lengthy training and testing schedule in an attempt to ensure that its investment in time and resources results in a productive and user accessible system.
The Phase II schedule has been delayed to allow for implementation of Phase I.

SENATOR LAUTENBERG: What impact do the slippages have on the program?

ANSWER: In response to internal reviews, OIG and GAO reports, as well as a Grace Commission recommendation, UMTA determined that it could appreciably improve its staff productively and the management of its grants program with a larger MIS capability. In addition, the GMIS Cost Benefit Report concluded that significant savings could be generated through a greater oversight of project implementation schedules. A delay in GMIS implementation has reduced UMTA's ability to apply an ADP resource to achieving this objective. However, UMTA staff continues to apply considerable time and effort to addressing program management issues.

SENATOR LAUTENBERG: What has UMTA done to mitigate the impact of these slippages?

ANSWER: Until the GMIS is fully implemented, UMTA is relying on the existing MIS and a number of desk top computer software packages to assist staff in managing the program. UMTA staff, particularly those in the regional offices, are aware of the need to improve UMTA project management capability and have realigned their activities to apply more resources to project management and oversight. These interim efforts have the added benefit of effectively prototyping or field testing a number of approaches to project management, the best of which will be incorporated in the Phase II GMIS.

APPORTIONMENTS

SENATOR LAUTENBERG: Provide the Fiscal Year 1987 formula grants apportionment.

ANSWER: The information follows:

UMTA FORMULA GRANT PROGRAM

FISCAL YEAR 1987 UMTA SECTION 9 FORMULA APPORTIONMENTS

FOR URBANIZED AREAS

URBANIZED AREA	FY 1987 APPORTIONMENT
OVER 1,000,000 IN POPULATION:	
Atlanta, Georgia	$24,192,896
Baltimore, Maryland	21,715,422
Boston, Massachusetts	55,529,243
Buffalo, New York	9,282,561
Chicago, Illinois-Northwestern Indiana	156,876,814
Cincinnati, Ohio-Kentucky	10,588,796
Cleveland, Ohio	20,554,656
Dallas-Fort Worth, Texas	19,631,571
Denver, Colorado	15,281,208
Detroit, Michigan	34,383,494
Fort Lauderdale-Hollywood, Florida	7,967,622
Houston, Texas	23,578,895
Kansas City, Missouri-Kansas	6,830,354
Los Angeles-Long Beach, California	121,854,171
Miami, Florida	20,469,216
Milwaukee, Wisconsin	14,067,581
Minneapolis-St. Paul, Minnesota	18,155,697
New Orleans, Louisiana	12,960,207
New York, N.Y.-Northeastern New Jersey	481,991,589
Philadelphia, Pennsylvania-New Jersey	84,593,431
Phoenix, Arizona	9,583,781
Pittsburgh, Pennsylvania	28,091,465
Portland, Oregon-Washington	13,161,450
St. Louis, Missouri-Illinois	16,179,675
San Diego, California	20,672,663
San Francisco-Oakland, California	81,045,527
San Jose, California	17,148,439
San Juan, Puerto Rico	11,787,511
Seattle-Everett, Washington	24,882,710
Washington, D.C.-Maryland-Virginia	56,884,486
SUBTOTAL	$1,439,943,131

UMTA FORMULA GRANT PROGRAM

FISCAL YEAR 1987 UMTA SECTION 9 FORMULA APPORTIONMENTS

FOR URBANIZED AREAS

URBANIZED AREA	FY 1987 APPORTIONMENT
200,000 TO 1,000,000 IN POPULATION:	
Akron, Ohio	$3,909,198
Albany-Schenectady-Troy, New York	4,976,996
Albuquerque, New Mexico	1,790,082
Allentown-Bethlehem-Easton, Pa.-N.J	2,744,712
Ann Arbor, Michigan	2,199,073
Augusta, Georgia-South Carolina	1,332,138
Austin, Texas	3,647,456
Bakersfield, California	1,991,864
Baton Rouge, Louisiana	2,402,107
Birmingham, Alabama	3,844,906
Bridgeport, Connecticut	4,767,812
Canton, Ohio	1,553,651
Charleston, South Carolina	2,046,956
Charlotte, North Carolina	2,862,637
Chattanooga, Tennessee-Georgia	1,852,129
Colorado Springs, Colorado	2,232,739
Columbia, South Carolina	1,115,144
Columbus, Georgia-Alabama	1,607,913
Columbus, Ohio	8,954,913
Corpus Christi, Texas	1,399,104
Davenport-Rock Island-Moline, Iowa-Illinois	2,326,566
Dayton, Ohio	10,311,185
Des Moines, Iowa	2,072,345
El Paso, Texas	3,829,680
Fayetteville, North Carolina	1,014,198
Flint, Michigan	2,297,388
Fort Wayne, Indiana	1,672,514
Fresno, California	3,322,050
Grand Rapids, Michigan	3,071,091
Greenville, South Carolina	1,493,365
Harrisburg, Pennsylvania	1,881,906
Hartford, Connecticut	5,951,797
Honolulu, Hawaii	15,349,846
Indianapolis, Indiana	6,247,867
Jackson, Mississippi	1,490,034
Jacksonville, Florida	6,120,696
Knoxville, Tennessee	1,779,734
Lansing, Michigan	2,087,517
Las Vegas, Nevada	2,638,861
Lawrence-Haverhill, Mass.-New Hampshire	2,397,811
Little Rock-North Little Rock, Arkansas	2,023,462
Lorain-Elyria, Ohio	846,201
Louisville, Kentucky-Indiana	7,786,152
Madison, Wisconsin	3,360,291
Melbourne-Cocoa, Florida	935,879

UMTA FORMULA GRANT PROGRAM

FISCAL YEAR 1987 UMTA SECTION 9 FORMULA APPORTIONMENTS

FOR URBANIZED AREAS

URBANIZED AREA	FY 1987 APPORTIONMENT
Memphis, Tennessee-Arkansas-Mississippi	6,702,453
Mobile, Alabama	1,732,623
Nashville-Davidson, Tennessee	3,921,659
New Haven, Connecticut	5,053,788
Newport News-Hampton, Virginia	2,252,519
Norfolk-Portsmouth, Virginia	7,596,886
Ogden, Utah	1,866,856
Oklahoma City, Oklahoma	3,622,415
Omaha, Nebraska-Iowa	4,808,209
Orlando, Florida	4,163,497
Oxnard-Ventura-Thousand Oaks, California	2,187,934
Pensacola, Florida	1,175,693
Peoria, Illinois	1,872,963
Providence-Pawtucket-Warwick, R.I.-Mass	11,835,705
Raleigh, North Carolina	1,536,161
Richmond, Virginia	4,791,637
Rochester, New York	6,102,073
Rockford, Illinois	1,505,839
Sacramento, California	7,628,808
St. Petersburg, Florida	6,750,735
Salt Lake City, Utah	7,061,807
San Antonio, Texas	12,262,772
San Bernardino-Riverside, California	5,386,002
Sarasota-Bradenton, Florida	1,938,814
Scranton-Wilkes-Barre, Pennsylvania	3,063,670
Shreveport, Louisiana	2,031,160
South Bend, Indiana-Michigan	2,032,496
Spokane, Washington	3,523,493
Springfield-Chicopee-Holyoke, Mass.-Conn	4,196,135
Syracuse, New York	4,383,750
Tacoma, Washington	5,361,835
Tampa, Florida	5,368,979
Toledo, Ohio-Michigan	4,901,885
Trenton, New Jersey-Pennsylvania	3,091,871
Tucson, Arizona	5,516,407
Tulsa, Oklahoma	2,986,042
West Palm Beach, Florida	3,152,972
Wichita, Kansas	2,266,619
Wilmington, Delaware-New Jersey-Maryland	3,023,732
Worcester, Massachusetts	2,234,819
Youngstown-Warren, Ohio	2,124,922
SUBTOTAL	$322,558,601

UMTA FORMULA GRANT PROGRAM

FISCAL YEAR 1987 UMTA SECTION 9 FORMULA APPORTIONMENTS

FOR URBANIZED AREAS

URBANIZED AREA	FY 1987 APPORTIONMENT
50,000 TO 200,000 IN POPULATION:	
Governor's apportionment for areas 50,000 to 200,000 population —	
ALABAMA	4,708,571
ALASKA	954,763
ARIZONA	411,200
ARKANSAS	1,387,459
CALIFORNIA	14,525,877
COLORADO	3,112,863
CONNECTICUT	13,646,446
DELAWARE (NONE)	
FLORIDA	6,507,734
GEORGIA	3,624,602
HAWAII	928,976
IDAHO	1,348,106
ILLINOIS	8,942,159
INDIANA	5,508,009
IOWA	3,072,269
KANSAS	1,320,670
KENTUCKY	2,794,038
LOUISIANA	3,263,489
MAINE	1,408,802
MARYLAND	1,236,711
MASSACHUSETTS	6,163,496
MICHIGAN	5,484,618
MINNESOTA	1,863,124
MISSISSIPPI	1,767,119
MISSOURI	2,177,962
MONTANA	1,576,016
NEBRASKA	1,483,329
NEVADA	1,193,070
NEW HAMPSHIRE	1,783,782
NEW JERSEY	1,398,490
NEW MEXICO	676,292
NEW YORK	4,458,751
NORTH CAROLINA	7,641,324
NORTH DAKOTA	1,339,722

UMTA FORMULA GRANT PROGRAM

FISCAL YEAR 1987 UMTA SECTION 9 FORMULA APPORTIONMENTS

FOR URBANIZED AREAS

URBANIZED AREA	FY 1987 APPORTIONMENT
OHIO....................................	4,339,502
OKLAHOMA................................	945,016
OREGON..................................	3,019,901
PENNSYLVANIA............................	8,647,220
PUERTO RICO.............................	6,041,760
RHODE ISLAND............................	480,745
SOUTH CAROLINA..........................	1,510,446
SOUTH DAKOTA............................	959,465
TENNESSEE...............................	1,643,653
TEXAS...................................	15,118,767
UTAH....................................	1,225,334
VERMONT.................................	477,767
VIRGINIA................................	3,424,489
WASHINGTON..............................	2,886,062
WEST VIRGINIA...........................	3,153,578
WISCONSIN...............................	7,170,607
WYOMING.................................	900,491
SUBTOTAL	$179,654,642
OVER 1,000,000 IN POPULATION	1,439,943,131
200,000 TO 1,000,000 IN POPULATION	322,558,601
50,000 TO 200,000 IN POPULATION	179,654,642
NATIONAL TOTALS	$1,942,156,374

UMTA FORMULA GRANTS PROGRAM

FISCAL YEAR 1987 UMTA SECTION 18 FORMULA APPORTIONMENTSNTS

AMOUNTS APPORTIONED TO STATES FOR NONURBANIZED AREAS

STATE	1987 APPORTIONMENT	STATE	1987 APPORTIONMENT
ALABAMA	$1,791,024	MONTANA	486,434
ALASKA	194,890	NEBRASKA	787,350
AMERICAN SAMOA...........	27,177	NEVADA	172,783
ARIZONA..................	677,078	NEW HAMPSHIRE	528,063
ARKANSAS	1,449,939	NEW JERSEY	903,093
CALIFORNIA	3,241,861	NEW MEXICO	654,311
COLORADO	734,527	NEW YORK	3,168,750
CONNECTICUT	667,087	NORTH CAROLINA	3,264,716
DELAWARE	190,827	NORTH DAKOTA	400,437
FLORIDA	1,950,401	NORTHERN MARIANA ISLANDS.	14,120
GEORGIA	2,406,508	OHIO	3,584,211
GUAM.....................	89,179	OKLAHOMA	1,479,680
HAWAII	232,682	OREGON	1,148,515
IDAHO	635,893	PENNSYLVANIA	3,951,281
ILLINOIS	2,636,047	PUERTO RICO	1,242,873
INDIANA	2,431,082	RHODE ISLAND	131,561
IOWA	1,667,769	SOUTH CAROLINA	1,625,857
KANSAS	1,269,896	SOUTH DAKOTA	464,546
KENTUCKY	2,043,188	TENNESSEE	2,107,587
LOUISIANA	1,686,523	TEXAS	4,292,238
MAINE	736,706	UTAH	346,178
MARYLAND	905,098	VERMONT	365,982
MASSACHUSETTS	1,087,477	VIRGINIA	1,937,377
MICHIGAN	2,928,611	VIRGIN ISLANDS...........	81,261
MINNESOTA	1,701,494	WASHINGTON	1,271,218
MISSISSIPPI	1,625,641	WEST VIRGINIA	1,301,149
MISSOURI	1,932,510	WISCONSIN	1,993,547
		WYOMING	296,066
TOTAL			$74,942,299

SENATOR LAUTENBERG: Provide for the record the Fiscal Year 1988 formula grants apportionment assuming full appropriation of the authorized level.

ANSWER: The exact amounts of the Section 9 apportionment for areas over 200,000 in population will be based on the latest operating and financial data submitted for the Section 15 Annual Report. However, using the data used for the Section 9 Fiscal Year 1987 apportionment, the Fiscal Year 1988 formula apportionment of the full authorization before the blending funds are added is as follows:

UMTA FORMULA GRANT PROGRAM

FISCAL YEAR 1988 UMTA SECTION 9 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION BEFORE BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED FOR URBANIZED AREAS

URBANIZED AREA	FY 1988 AUTHORIZATION (GENERAL FUNDS)
OVER 1,000,000 IN POPULATION:	
Atlanta, Georgia	$25,208,723
Baltimore, Maryland	22,632,119
Boston, Massachusetts	58,169,934
Buffalo, New York	9,696,247
Chicago, Illinois-Northwestern Indiana	164,032,109
Cincinnati, Ohio-Kentucky	10,318,651
Cleveland, Ohio	21,428,532
Dallas-Fort Worth, Texas	20,451,623
Denver, Colorado	15,960,488
Detroit, Michigan	35,991,171
Fort Lauderdale-Hollywood, Florida	8,312,501
Houston, Texas	24,609,748
Kansas City, Missouri-Kansas	7,169,077
Los Angeles-Long Beach, California	126,583,888
Miami, Florida	21,361,520
Milwaukee, Wisconsin	14,687,870
Minneapolis-St. Paul, Minnesota	18,878,059
New Orleans, Louisiana	13,495,801
New York, N.Y.-Northeastern New Jersey	513,438,751
Philadelphia, Pennsylvania-New Jersey	88,498,825
Phoenix, Arizona	10,017,342
Pittsburgh, Pennsylvania	29,350,156
Portland, Oregon-Washington	13,740,433
St. Louis, Missouri-Illinois	16,906,840
San Diego, California	21,572,906
San Francisco-Oakland, California	84,542,983
San Jose, California	17,960,774
San Juan, Puerto Rico	12,359,258
Seattle-Everett, Washington	26,106,295
Washington, D.C.-Maryland-Virginia	59,486,676
SUBTOTAL	$1,512,969,300

UMTA FORMULA GRANT PROGRAM

FISCAL YEAR 1988 UMTA SECTION 9 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION BEFORE BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED FOR URBANIZED AREAS

URBANIZED AREA	FY 1988 AUTHORIZATION (GENERAL FUNDS)
200,000 TO 1,000,000 IN POPULATION:	
Akron, Ohio	$4,095,335
Albany-Schenectady-Troy, New York	5,194,216
Albuquerque, New Mexico	1,874,089
Allentown-Bethlehem-Easton, Pa.-N.J	2,873,668
Ann Arbor, Michigan	2,304,455
Augusta, Georgia-South Carolina	1,394,901
Austin, Texas	3,822,048
Bakersfield, California	2,086,786
Baton Rouge, Louisiana	2,505,891
Birmingham, Alabama	4,021,244
Bridgeport, Connecticut	5,003,902
Canton, Ohio	1,629,766
Charleston, South Carolina	2,133,806
Charlotte, North Carolina	2,987,174
Chattanooga, Tennessee-Georgia	1,939,335
Colorado Springs, Colorado	2,334,661
Columbia, South Carolina	1,170,445
Columbus, Georgia-Alabama	1,678,805
Columbus, Ohio	9,331,050
Corpus Christi, Texas	1,466,224
Davenport-Rock Island-Moline, Iowa-Illinois	2,437,300
Dayton, Ohio	10,792,678
Des Moines, Iowa	2,167,539
El Paso, Texas	4,017,902
Fayetteville, North Carolina	1,062,723
Flint, Michigan	2,404,733
Fort Wayne, Indiana	1,753,946
Fresno, California	3,474,978
Grand Rapids, Michigan	3,212,013
Greenville, South Carolina	1,564,904
Harrisburg, Pennsylvania	1,975,040
Hartford, Connecticut	6,205,443
Honolulu, Hawaii	15,798,912
Indianapolis, Indiana	6,516,102
Jackson, Mississippi	1,561,643
Jacksonville, Florida	6,332,764
Knoxville, Tennessee	1,861,505
Lansing, Michigan	2,191,036
Las Vegas, Nevada	2,755,133
Lawrence-Haverhill, Mass.-New Hampshire	2,513,887
Little Rock-North Little Rock, Arkansas	2,114,233
Lorain-Elyria, Ohio	888,125
Louisville, Kentucky-Indiana	8,127,961
Madison, Wisconsin	3,508,427
Melbourne-Cocoa, Florida	981,327

UMTA FORMULA GRANT PROGRAM

FISCAL YEAR 1988 UMTA SECTION 9 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION BEFORE BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED FOR URBANIZED AREAS

URBANIZED AREA	FY 1988 AUTHORIZATION (GENERAL FUNDS)
Memphis, Tennessee-Arkansas-Mississippi	7,005,060
Mobile, Alabama	1,811,335
Nashville-Davidson, Tennessee	4,087,243
New Haven, Connecticut	5,286,355
Newport News-Hampton, Virginia	2,347,099
Norfolk-Portsmouth, Virginia	7,907,700
Ogden, Utah	1,951,193
Oklahoma City, Oklahoma	3,797,532
Omaha, Nebraska-Iowa	5,034,443
Orlando, Florida	4,355,750
Oxnard-Ventura-Thousand Oaks, California	2,292,786
Pensacola, Florida	1,231,114
Peoria, Illinois	1,964,828
Providence-Pawtucket-Warwick, R.I.-Mass	12,382,316
Raleigh, North Carolina	1,606,277
Richmond, Virginia	4,991,463
Rochester, New York	6,384,057
Rockford, Illinois	1,576,114
Sacramento, California	7,949,988
St. Petersburg, Florida	7,044,356
Salt Lake City, Utah	7,380,729
San Antonio, Texas	12,790,076
San Bernardino-Riverside, California	5,649,380
Sarasota-Bradenton, Florida	2,032,640
Scranton-Wilkes-Barre, Pennsylvania	3,203,963
Shreveport, Louisiana	2,123,552
South Bend, Indiana-Michigan	2,129,398
Spokane, Washington	3,675,966
Springfield-Chicopee-Holyoke, Mass.-Conn	4,403,544
Syracuse, New York	4,587,729
Tacoma, Washington	5,600,465
Tampa, Florida	5,609,270
Toledo, Ohio-Michigan	5,119,272
Trenton, New Jersey-Pennsylvania	3,236,558
Tucson, Arizona	5,773,921
Tulsa, Oklahoma	3,127,059
West Palm Beach, Florida	3,307,448
Wichita, Kansas	2,373,859
Wilmington, Delaware-New Jersey-Maryland	3,166,173
Worcester, Massachusetts	2,341,679
Youngstown-Warren, Ohio	2,229,044
SUBTOTAL	$336,936,789

UMTA FORMULA GRANT PROGRAM

FISCAL YEAR 1988 UMTA SECTION 9 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION BEFORE BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED FOR URBANIZED AREAS

URBANIZED AREA	FY 1988 AUTHORIZATION (GENERAL FUNDS)
50,000 TO 200,000 IN POPULATION:	
Governor's apportionment for areas 50,000 to 200,000 population --	
ALABAMA	4,942,075
ALASKA	1,002,111
ARIZONA	431,592
ARKANSAS	1,456,264
CALIFORNIA	15,246,230
COLORADO	3,267,233
CONNECTICUT	14,323,189
DELAWARE (NONE)	
FLORIDA	6,830,460
GEORGIA	3,804,350
HAWAII	975,045
IDAHO	1,414,960
ILLINOIS	9,385,610
INDIANA	5,781,157
IOWA	3,224,626
KANSAS	1,386,163
KENTUCKY	2,932,598
LOUISIANA	3,425,329
MAINE	1,478,666
MARYLAND	1,298,041
MASSACHUSETTS	6,469,150
MICHIGAN	5,756,606
MINNESOTA	1,955,518
MISSISSIPPI	1,854,752
MISSOURI	2,285,970
MONTANA	1,654,173
NEBRASKA	1,556,888
NEVADA	1,252,235
NEW HAMPSHIRE	1,872,242
NEW JERSEY	1,467,843
NEW MEXICO	709,830
NEW YORK	4,679,866
NORTH CAROLINA	8,020,265
NORTH DAKOTA	1,406,160

UMTA FORMULA GRANT PROGRAM

FISCAL YEAR 1988 UMTA SECTION 9 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION BEFORE BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED FOR URBANIZED AREAS

URBANIZED AREA	FY 1988 AUTHORIZATION (GENERAL FUNDS)
OHIO	4,554,703
OKLAHOMA	991,880
OREGON	3,169,661
PENNSYLVANIA	9,076,045
PUERTO RICO	6,341,378
RHODE ISLAND	504,585
SOUTH CAROLINA	1,585,351
SOUTH DAKOTA	1,007,046
TENNESSEE	1,725,164
TEXAS	15,868,523
UTAH	1,286,099
VERMONT	501,460
VIRGINIA	3,594,313
WASHINGTON	3,029,185
WEST VIRGINIA	3,305,967
WISCONSIN	7,526,206
WYOMING	945,147
SUBTOTAL	$188,563,911
OVER 1,000,000 IN POPULATION	1,512,969,300
200,000 TO 1,000,000 IN POPULATION	336,936,789
50,000 TO 200,000 IN POPULATION	188,563,911
NATIONAL TOTALS	$2,038,470,000

UMTA FORMULA GRANTS PROGRAM

FISCAL YEAR 1988 UMTA SECTION 18 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION BEFORE BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED TO STATES FOR NONURBANIZED AREAS

STATE	1988 AUTHORIZATION (GENERAL FUNDS)	STATE	1988 AUTHORIZATION (GENERAL FUNDS)
ALABAMA	$1,470,487	MONTANA	399,378
ALASKA	160,011	NEBRASKA	646,439
AMERICAN SAMOA..........	22,313	NEVADA	141,860
ARIZONA.................	555,903	NEW HAMPSHIRE	433,556
ARKANSAS	1,190,446	NEW JERSEY	741,468
CALIFORNIA	2,661,670	NEW MEXICO	537,210
COLORADO	603,070	NEW YORK	2,601,644
CONNECTICUT	547,699	NORTH CAROLINA	2,680,435
DELAWARE	156,675	NORTH DAKOTA	328,771
FLORIDA	1,601,341	NORTHERN MARIANA ISLANDS.	11,593
GEORGIA	1,975,819	OHIO	2,942,750
GUAM....................	73,219	OKLAHOMA	1,214,864
HAWAII	191,039	OREGON	942,967
IDAHO	522,088	PENNSYLVANIA	3,244,127
ILLINOIS	2,164,278	PUERTO RICO	1,020,438
INDIANA	1,995,995	RHODE ISLAND	108,016
IOWA	1,369,291	SOUTH CAROLINA	1,334,880
KANSAS	1,042,625	SOUTH DAKOTA	381,407
KENTUCKY	1,677,522	TENNESSEE	1,730,396
LOUISIANA	1,384,688	TEXAS	3,524,063
MAINE	604,859	UTAH	284,223
MARYLAND	743,114	VERMONT	300,483
MASSACHUSETTS	892,853	VIRGINIA	1,590,648
MICHIGAN	2,404,482	VIRGIN ISLANDS..........	66,718
MINNESOTA	1,396,981	WASHINGTON	1,043,710
MISSISSIPPI	1,334,703	WEST VIRGINIA	1,068,284
MISSOURI	1,586,652	WISCONSIN	1,636,765
		WYOMING	243,080
TOTAL			$61,530,000

SENATOR LAUTENBERG: List separately the apportionment of Fiscal Year 1988 funds under the "blending provision" for the Section 3 program assuming the authorization is fully appropriated.

ANSWER: The exact amounts of the Section 9 apportionment for areas over 200,000 in population will again be based on the latest Section 15 data. However, using the data used for the Section 9 Fiscal Year 1987 apportionment, the Fiscal Year 1988 formula apportionment after the blending funds are added is as follows:

UMTA FORMULA GRANTS PROGRAM

FISCAL YEAR 1988 UMTA SECTION 9 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION AFTER BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED FOR URBANIZED AREAS

URBANIZED AREA	FY 1988 AUTHORIZATION (GENERAL FUNDS)	FY 1988 AUTHORIZATION (TRUST FUNDS)	TOTAL FY 1988 AUTHORIZATION
OVER 1,000,000 POPULATION:			
Atlanta, Georgia	$25,172,489	$1,236,649	26,409,138
Baltimore, Maryland	22,599,589	1,110,250	23,709,839
Boston, Massachusetts	58,086,324	2,853,608	60,939,932
Buffalo, New York	9,682,310	475,663	10,157,973
Chicago, Illinois-Northwestern Indiana	163,796,337	8,046,825	171,843,162
Cincinnati, Ohio-Kentucky	10,303,819	506,196	10,810,015
Cleveland, Ohio	21,397,732	1,051,207	22,448,939
Dallas-Fort Worth, Texas	20,422,226	1,003,283	21,425,509
Denver, Colorado	15,937,547	782,964	16,720,511
Detroit, Michigan	35,939,439	1,765,597	37,705,036
Fort Lauderdale-Hollywood, Florida	8,300,553	407,781	8,708,334
Houston, Texas	24,574,375	1,207,266	25,781,641
Kansas City, Missouri-Kansas	7,158,773	351,689	7,510,462
Los Angeles-Long Beach, California	126,401,943	6,209,750	132,611,693
Miami, Florida	21,330,816	1,047,919	22,378,735
Milwaukee, Wisconsin	14,666,758	720,534	15,387,292
Minneapolis-St. Paul, Minnesota	18,850,924	926,090	19,777,014
New Orleans, Louisiana	13,476,403	662,055	14,138,458
New York, N.Y.-Northeastern New Jersey	512,700,757	25,187,454	537,888,211
Philadelphia, Pennsylvania-New Jersey	88,371,621	4,341,434	92,713,055
Phoenix, Arizona	10,002,944	491,415	10,494,359
Pittsburgh, Pennsylvania	29,307,970	1,439,813	30,747,783
Portland, Oregon-Washington	13,720,683	674,056	14,394,739
St. Louis, Missouri-Illinois	16,882,539	829,389	17,711,928
San Diego, California	21,541,898	1,058,289	22,600,187
San Francisco-Oakland, California	84,421,465	4,147,374	88,568,839
San Jose, California	17,934,958	881,091	18,816,049
San Juan, Puerto Rico	12,341,494	606,301	12,947,795
Seattle-Everett, Washington	26,068,771	1,280,681	27,349,452
Washington, D.C.-Maryland-Virginia	59,401,173	2,918,202	62,319,375
SUBTOTAL	$1,510,794,630	$74,220,825	$1,585,015,455

UMTA FORMULA GRANTS PROGRAM

FISCAL YEAR 1988 UMTA SECTION 9 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION AFTER BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED FOR URBANIZED AREAS

URBANIZED AREA	FY 1988 AUTHORIZATION (GENERAL FUNDS)	FY 1988 AUTHORIZATION (TRUST FUNDS)	TOTAL FY 1988 AUTHORIZATION
200,000-1,000,000 POPULATION:			
Akron, Ohio	$4,089,449	$200,902	$4,290,351
Albany-Schenectady-Troy, New York	5,186,750	254,810	5,441,560
Albuquerque, New Mexico	1,871,395	91,936	1,963,331
Allentown-Bethlehem-Easton, Pa.-N.J	2,869,537	140,972	3,010,509
Ann Arbor, Michigan	2,301,143	113,048	2,414,191
Augusta, Georgia-South Carolina	1,392,896	68,429	1,461,325
Austin, Texas	3,816,554	187,496	4,004,050
Bakersfield, California	2,083,786	102,370	2,186,156
Baton Rouge, Louisiana	2,502,289	122,930	2,625,219
Birmingham, Alabama	4,015,464	197,268	4,212,732
Bridgeport, Connecticut	4,996,709	245,473	5,242,182
Canton, Ohio	1,627,424	79,950	1,707,374
Charleston, South Carolina	2,130,739	104,677	2,235,416
Charlotte, North Carolina	2,982,881	146,540	3,129,421
Chattanooga, Tennessee-Georgia	1,936,547	95,137	2,031,684
Colorado Springs, Colorado	2,331,305	114,530	2,445,835
Columbia, South Carolina	1,168,762	57,418	1,226,180
Columbus, Georgia-Alabama	1,676,392	82,356	1,758,748
Columbus, Ohio	9,317,638	457,748	9,775,386
Corpus Christi, Texas	1,464,116	71,928	1,536,044
Davenport-Rock Island-Moline, Iowa-Illinois	2,433,797	119,565	2,553,362
Dayton, Ohio	10,777,165	529,450	11,306,615
Des Moines, Iowa	2,164,424	106,332	2,270,756
El Paso, Texas	4,012,127	197,104	4,209,231
Fayetteville, North Carolina	1,061,196	52,133	1,113,329
Flint, Michigan	2,401,276	117,968	2,519,244
Fort Wayne, Indiana	1,751,425	86,042	1,837,467
Fresno, California	3,469,983	170,470	3,640,453
Grand Rapids, Michigan	3,207,396	157,570	3,364,966
Greenville, South Carolina	1,562,655	76,769	1,639,424
Harrisburg, Pennsylvania	1,972,201	96,888	2,069,089
Hartford, Connecticut	6,196,523	304,417	6,500,940
Honolulu, Hawaii	15,776,203	775,038	16,551,241
Indianapolis, Indiana	6,506,736	319,657	6,826,393
Jackson, Mississippi	1,559,399	76,609	1,636,008
Jacksonville, Florida	6,323,662	310,663	6,634,325
Knoxville, Tennessee	1,858,830	91,319	1,950,149
Lansing, Michigan	2,187,887	107,484	2,295,371
Las Vegas, Nevada	2,751,173	135,157	2,886,330
Lawrence-Haverhill, Mass.-New Hampshire	2,510,274	123,322	2,633,596
Little Rock-North Little Rock, Arkansas	2,111,194	103,717	2,214,911
Lorain-Elyria, Ohio	886,849	43,568	930,417
Louisville, Kentucky-Indiana	8,116,278	398,729	8,515,007
Madison, Wisconsin	3,503,384	172,111	3,675,495
Melbourne-Cocoa, Florida	979,916	48,140	1,028,056

UMTA FORMULA GRANTS PROGRAM

FISCAL YEAR 1988 UMTA SECTION 9 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION AFTER BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED FOR URBANIZED AREAS

URBANIZED AREA	FY 1988 AUTHORIZATION (GENERAL FUNDS)	FY 1988 AUTHORIZATION (TRUST FUNDS)	TOTAL FY 1988 AUTHORIZATION
Memphis, Tennessee-Arkansas-Mississippi....	6,994,992	343,643	7,338,635
Mobile, Alabama............................	1,808,732	88,858	1,897,590
Nashville-Davidson, Tennessee..............	4,081,368	200,505	4,281,873
New Haven, Connecticut.....................	5,278,757	259,330	5,538,087
Newport News-Hampton, Virginia.............	2,343,725	115,140	2,458,865
Norfolk-Portsmouth, Virginia...............	7,896,334	387,923	8,284,257
Ogden, Utah................................	1,948,388	95,718	2,044,106
Oklahoma City, Oklahoma....................	3,792,074	186,293	3,978,367
Omaha, Nebraska-Iowa.......................	5,027,206	246,972	5,274,178
Orlando, Florida...........................	4,349,489	213,677	4,563,166
Oxnard-Ventura-Thousand Oaks, California...	2,289,490	112,476	2,401,966
Pensacola, Florida.........................	1,229,345	60,394	1,289,739
Peoria, Illinois...........................	1,962,004	96,387	2,058,391
Providence-Pawtucket-Warwick, R.I.-Mass....	12,364,519	607,432	12,971,951
Raleigh, North Carolina....................	1,603,968	78,798	1,682,766
Richmond, Virginia.........................	4,984,288	244,863	5,229,151
Rochester, New York........................	6,374,881	313,179	6,688,060
Rockford, Illinois.........................	1,573,849	77,318	1,651,167
Sacramento, California.....................	7,938,561	389,998	8,328,559
St. Petersburg, Florida....................	7,034,231	345,571	7,379,802
Salt Lake City, Utah.......................	7,370,120	362,072	7,732,192
San Antonio, Texas.........................	12,771,692	627,435	13,399,127
San Bernardino-Riverside, California.......	5,641,260	277,138	5,918,398
Sarasota-Bradenton, Florida................	2,029,719	99,714	2,129,433
Scranton-Wilkes-Barre, Pennsylvania........	3,199,358	157,175	3,356,533
Shreveport, Louisiana......................	2,120,499	104,174	2,224,673
South Bend, Indiana-Michigan...............	2,126,338	104,461	2,230,799
Spokane, Washington........................	3,670,682	180,330	3,851,012
Springfield-Chicopee-Holyoke, Mass.-Conn...	4,397,214	216,022	4,613,236
Syracuse, New York.........................	4,581,135	225,057	4,806,192
Tacoma, Washington.........................	5,592,415	274,739	5,867,154
Tampa, Florida.............................	5,601,207	275,171	5,876,378
Toledo, Ohio-Michigan......................	5,111,914	251,133	5,363,047
Trenton, New Jersey-Pennsylvania...........	3,231,906	158,774	3,390,680
Tucson, Arizona............................	5,765,622	283,248	6,048,870
Tulsa, Oklahoma............................	3,122,564	153,402	3,275,966
West Palm Beach, Florida...................	3,302,694	162,251	3,464,945
Wichita, Kansas............................	2,370,447	116,453	2,486,900
Wilmington, Delaware-New Jersey-Maryland...	3,161,622	155,321	3,316,943
Worcester, Massachusetts...................	2,338,313	114,874	2,453,187
Youngstown-Warren, Ohio....................	2,225,840	109,349	2,335,189
SUBTOTAL	$336,452,491	$16,528,908	$352,981,399

UMTA FORMULA GRANTS PROGRAM

FISCAL YEAR 1988 UMTA SECTION 9 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION AFTER BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED FOR URBANIZED AREAS

URBANIZED AREA	FY 1988 AUTHORIZATION (GENERAL FUNDS)	FY 1988 AUTHORIZATION (TRUST FUNDS)	TOTAL FY 1988 AUTHORIZATION
50,000-200,000 POPULATION:			
Governor's apportionment for areas 50,000-200,000 population --			
ALABAMA	4,934,971	242,440	5,177,411
ALASKA	1,000,671	49,160	1,049,831
ARIZONA	430,971	21,172	452,143
ARKANSAS	1,454,171	71,439	1,525,610
CALIFORNIA	15,224,316	747,925	15,972,241
COLORADO	3,262,537	160,279	3,422,816
CONNECTICUT	14,302,603	702,645	15,005,248
DELAWARE (NONE)			
FLORIDA	6,820,642	335,079	7,155,721
GEORGIA	3,798,882	186,628	3,985,510
HAWAII	973,644	47,832	1,021,476
IDAHO	1,412,926	69,412	1,482,338
ILLINOIS	9,372,120	460,425	9,832,545
INDIANA	5,772,848	283,603	6,056,451
IOWA	3,219,991	158,189	3,378,180
KANSAS	1,384,171	67,999	1,452,170
KENTUCKY	2,928,382	143,862	3,072,244
LOUISIANA	3,420,406	168,034	3,588,440
MAINE	1,476,541	72,537	1,549,078
MARYLAND	1,296,176	63,678	1,359,854
MASSACHUSETTS	6,459,852	317,352	6,777,204
MICHIGAN	5,748,332	282,399	6,030,731
MINNESOTA	1,952,707	95,931	2,048,638
MISSISSIPPI	1,852,086	90,987	1,943,073
MISSOURI	2,282,684	112,142	2,394,826
MONTANA	1,651,795	81,149	1,732,944
NEBRASKA	1,554,651	76,375	1,631,026
NEVADA	1,250,435	61,430	1,311,865
NEW HAMPSHIRE	1,869,551	91,846	1,961,397
NEW JERSEY	1,465,733	72,007	1,537,740
NEW MEXICO	708,810	34,822	743,632
NEW YORK	4,673,139	229,577	4,902,716
NORTH CAROLINA	8,008,737	393,445	8,402,182
NORTH DAKOTA	1,404,139	68,981	1,473,120

UMTA FORMULA GRANTS PROGRAM

FISCAL YEAR 1988 UMTA SECTION 9 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION AFTER BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED FOR URBANIZED AREAS

URBANIZED AREA	FY 1988 AUTHORIZATION (GENERAL FUNDS)	FY 1988 AUTHORIZATION (TRUST FUNDS)	TOTAL FY 1988 AUTHORIZATION
OHIO	4,548,156	223,437	4,771,593
OKLAHOMA	990,455	48,659	1,039,114
OREGON	3,165,105	155,492	3,320,597
PENNSYLVANIA	9,063,000	445,238	9,508,238
PUERTO RICO	6,332,263	311,084	6,643,347
RHODE ISLAND	503,860	24,753	528,613
SOUTH CAROLINA	1,583,072	77,773	1,660,845
SOUTH DAKOTA	1,005,598	49,401	1,054,999
TENNESSEE	1,722,684	84,631	1,807,315
TEXAS	15,845,715	778,449	16,624,164
UTAH	1,284,251	63,091	1,347,342
VERMONT	500,739	24,600	525,339
VIRGINIA	3,589,147	176,326	3,765,473
WASHINGTON	3,024,831	148,600	3,173,431
WEST VIRGINIA	3,305,210	162,377	3,467,587
WISCONSIN	7,515,388	369,209	7,884,597
WYOMING	943,789	46,366	990,155
SUBTOTAL	$188,292,879	$9,250,267	$197,543,146
OVER 1,000,000 POPULATION	1,510,794,630	74,220,825	1,585,015,455
200,000-1,000,000 POPULATION	336,452,491	16,528,908	352,981,399
50,000-200,000 POPULATION	188,292,879	9,250,267	197,543,146
NATIONAL TOTALS	$2,035,540,000	$100,000,000	$2,135,540,000

UMTA FORMULA GRANTS PROGRAM

FISCAL YEAR 1988 UMTA SECTION 18 FORMULA APPORTIONMENTS OF FULL AUTHORIZATION AFTER BLENDING FUNDS ARE ADDED

AMOUNTS APPORTIONED TO STATES FOR NONURBANIZED AREAS

STATE	1988 AUTHORIZATION (GENERAL FUNDS)
ALABAMA	$1,540,511
ALASKA	167,630
AMERICAN SAMOA	23,376
ARIZONA	582,374
ARKANSAS	1,247,134
CALIFORNIA	2,788,416
COLORADO	631,787
CONNECTICUT	573,780
DELAWARE	164,136
FLORIDA	1,677,595
GEORGIA	2,069,906
GUAM	76,705
HAWAII	200,136
IDAHO	546,950
ILLINOIS	2,267,339
INDIANA	2,091,042
IOWA	1,434,495
KANSAS	1,092,274
KENTUCKY	1,757,404
LOUISIANA	1,450,626
MAINE	633,662
MARYLAND	778,500
MASSACHUSETTS	935,370
MICHIGAN	2,518,982
MINNESOTA	1,463,503
MISSISSIPPI	1,398,260
MISSOURI	1,662,207
MONTANA	418,396
NEBRASKA	677,222
NEVADA	148,616
NEW HAMPSHIRE	454,202
NEW JERSEY	776,776
NEW MEXICO	562,792
NEW YORK	2,725,532
NORTH CAROLINA	2,808,075
NORTH DAKOTA	344,427
NORTHERN MARIANA ISLANDS	12,145
OHIO	3,082,881
OKLAHOMA	1,272,715
OREGON	987,871
PENNSYLVANIA	3,398,609
PUERTO RICO	1,069,030
RHODE ISLAND	113,159
SOUTH CAROLINA	1,398,446
SOUTH DAKOTA	399,569
TENNESSEE	1,812,796
TEXAS	3,691,876
UTAH	297,758
VERMONT	314,792
VIRGINIA	1,666,393
VIRGIN ISLANDS	69,895
WASHINGTON	1,093,411
WEST VIRGINIA	1,119,155
WISCONSIN	1,714,706
WYOMING	254,655
TOTAL	$64,460,000

LIQUIDATING CASH

SENATOR LAUTENBERG: Given enactment of H.R.2 what is the liquidating cash requirement for fiscal year 1987 assuming obligation ceiling for the Section 3 program of $900 million; $1 billion, $1.1 billion; and $1.2 billion?

ANSWER: With the passage of H.R.2, our Discretionary Grants program was reauthorized and will require a $1.1 billion liquidating cash appropriation to carry out this program in FY 1988. Liquidating cash appropriations finance Discretionary Grant program cash disbursements from the Mass Transit Account of the Highway Trust Fund. Ninety (90) percent of these disbursements (or outlays) in FY 1988 are related to obligations incurred in prior fiscal years. Therefore, our liquidating cash request for FY 1988 will vary only marginally with the obligation ceiling for FY 1988. The obligation ceiling for FY 1988, whether it be $0.9 billion to $1.2 billion, will have a significant effect on outlays in the FY 1989 - FY 1992 period; but, FY 1988 outlays will remain virtually unaffected by an obligation ceiling, as long as it is in the one billion range assumed in our outlay forecast.

PERSONNEL LEVELS

SENATOR LAUTENBERG: On what basis was this cut proposed?

ANSWER: The fiscal year 1988 budget was submitted in accordance with the proposed authorizing legislation which assumed a $1.5 billion UMTA program. The structure and nature of the UMTA programs would have undergone substantial change and allowed more formula based, block grant type activities, thus reducing the required UMTA staff levels.

SENATOR LAUTENBERG: What office would lose personnel?

ANSWER: UMTA had planned to manage the restructuring of the work force through attrition. No specific office had been proposed for reductions, instead, case by case management of vacancies would gradually realign UMTA offices.

SENATOR LAUTENBERG: Would these cuts come from regional offices? (If so, which ones?)

ANSWER: No specific cuts are planned at this time for any office, regional or Headquarters. UMTA plans to manage staff changes through attrition and careful review of critical vacancies.

SENATOR LAUTENBERG: List the reductions by reason; i.e., change to formula based program, new grant approval process, automated contract writing system etc.

ANSWER: The bulk of the staffing reductions were to be associated with a substantially smaller program that would be totally formulized.

SENATOR LAUTENBERG: Assuming full appropriations of the authorized level what would be the number of personnel necessary?

ANSWER: Retaining UMTA programs at their present level would require about 463 Full-Time Equivalent (FTE) workyears plus 13 workyears for exempt categories, such as student aides, for a total of 476 workyears.

SENATOR LAUTENBERG: What would be the administrative dollar request at the fully authorized level?

ANSWER: In order to fund a fully authorized level, UMTA would need $34,949,000. The increase is attributable to both increased personnel salaries and the increased federal contribution to the new Federal Employees Retirement System (FERS).

NOTICES OF PROPOSED RULEMAKINGS

SENATOR LAUTENBERG: List and describe the notices of proposed rulemaking for fiscal years 1986 and 1987, and planned for fiscal year 1988. Also, provide description of the status of those rulemakings, including dates final rules were issued.

ANSWER: The transit reauthorization legislation that became effective on April 2, 1987, requires us to issue a number of rules, and we thus will be promulgating notices of proposed rulemaking on these in the near future. These include rules on criteria for new starts; capitalization of cost-effective leasing activities; establishment of a bus testing facility; preaward and post delivery audit of rolling stock purchases; project management oversight; and revisions to Buy America requirements.

Regarding past activities, on April 13, 1987, the Urban Mass Transportation Administration (UMTA) issued its final rule on charter bus activities. This regulation describes what charter service UMTA recipients may provide using UMTA funded facilities or equipment. On May 23, 1986, the Department issued a final rule on nondiscrimination on the basis of handicap in financial assistance programs. It requires recipients of Federal transit funds to establish programs to provide transit services to handicapped persons. In 1986, UMTA issued a proposed rule on section 15 reporting requirements. This would establish deadlines for the submission of reporting data by grantees, and would streamline the data to be reported. We expect to publish this rule in final form soon.

SENATOR LAUTENBERG: Describe UMTA's intentions and rationale regarding the new procedures regarding Section 15 reports that are incomplete, uncertified and inaccurate.

ANSWER: The new procedures for handling the reporting problems were published in a revision to the Section 15 regulation and appeared in the Federal Register last year as a Notice of Proposed Rule Making. The comments received have been included as appropriate and a final rule is now being reviewed for publication in the Federal Register. The procedures when published will clarify the responsibilities of both UMTA and the reporters. Consequences are also included for not meeting these responsibilities. It is believed that by sharpening the understanding of responsibilities and the consequences for not meeting these responsibilities, most of the problems of late, incomplete, and inaccurate reporting will be resolved.

SENATOR LAUTENBERG: Briefly describe the status of UMTA's regulations concerning availability of rail mod funds for new start cities. Include UMTA's policy statement on this situation.

ANSWER: As a threshold matter, the question has never been the subject of a formal regulation. However, during 1986 we did begin work on a policy paper discussing various aspects of the Section 3 Rail Modernization Program. We felt this was necessary for two principal reasons: to have a companion document for Rail Modernization that would parallel the policy paper on New Starts issued in 1984, and also to make whatever adjustments and revisions in the Rail Modernization Program as were warranted in the STAA of 1982 and the results and findings of the Rail Modernization Study which was forwarded to the Congress on March 16, 1987.

In this paper it is our view that since urbanized areas participating in the Rail Modernization Program are doing so to correct decades of deferred maintenance in their existing rail transit systems, it is simply poor investment strategy to construct new lines and systems until that task is accomplished. Therefore, we precluded urbanized areas from participating in both programs at the same time.

The policy statement has not yet been issued in final form and is thus not available at this time. We are reviewing the meaning and intent of Section 3(K)(2) which was recently added to the Urban Mass Transportation Act by the Surface Transportation and Uniform Relocation Assistance Act of 1987 to determine how and in what fashion to proceed with the formalization of Federal policy for the Rail Modernization Program.

RURAL TRANSIT ASSISTANCE PROGRAM (RTAP)

SENATOR LAUTENBERG: The Committee in creating an RTAP initiative believed that there was a need for a coordinated, comprehensive effort on the part of UMTA to strengthen rural transportation services. Based on the bill and report language of the F.Y. Continuing Resolution and the recently enacted Surface Transportation Bill, H.R. 2, outline UMTA's plans for this program. Where will this program/office be based?

ANSWER: UMTA plans to administer the RTAP program in two components: a State program and a national program. Under the State programs component, 85 percent of the RTAP funds, or $4,250,000, is allocated to the States for development and delivery of training and technical assistance programs in conjunction with their administration of the Section 18 program. Each State agency will develop a program of projects for the use of the RTAP funds. Eligible categories are training, technical assistance, research and related support services. RTAP funds will be awarded as an additional element of a State's annual Section 18 application. The national program component, carried out through a grant contract to a consortium of organizations, is funded at $750,000.

The State program will be administered within the Office of Grants Management, the same office that administers the Section 18 program. The National program will be managed through the Office of Technical Assistance. Both of these offices are within UMTA headquarters in Washington. In addition, use of regional office staff will be made.

SENATOR LAUTENBERG: How does UMTA plan to spend the Fiscal Year 1987 funds?

ANSWER: Under the State program component, the States have now been advised of their FY 1987 allocation of $4,250,000. It is too soon yet to tell how many States will apply for their allocation this fiscal year. Because the program is being implemented late in the year, UMTA plans to allow the States an additional fiscal year in which to program and obligate Fiscal Year 1987 RTAP funds.

UMTA plans to begin implementation of the National program within the next several weeks through a $750,000 cooperative agreement.

SENATOR LAUTENBERG: Are outside contracts going to be let, to whom, for what purposes, and for how much money?

ANSWER: The Fiscal Year 1987 national program component will be carried out through a cooperative agreement with the American Public Works Association (APWA) in the amount of $750,000. APWA will serve as the lead organization and grant recipient for a consortium of organizations which will carry out the following activities as part of this $750,000 project:

1. Overall coordination and liaison with State agencies, by APWA at $225,000.
2. Establishment of a national information clearinghouse, by Rural America at $200,000.
3. Development of training and technical assistance materials, by International Support Services (ISS) at $225,000.
4. Establishment of a peer-to-peer network, by the National Association for Transportation Alternatives (NASTA) at $100,000.

SENATOR LAUTENBERG: By category of activity breakdown where the RTAP funds will be spent (e.g. data collection, technical assistance materials, technical assistance workshops, newsletters, administration of the program, etc.

ANSWER: Under the State program, each State agency will develop a program of projects for the use of the RTAP funds. Eligible categories are training, technical assistance, research and related support services. States have the flexibility to design their programs based on the particular needs of rural operators within their State. At this time we do not know what the breakdown of activities will be among the categories within the State programs component.

Under the national program, the individual organizations within the consortium are still developing work programs for their areas of responsibility. The consortium plans to establish an advisory group to aid it in determinng the kinds of training and technical assistance products most needed by the rural transit community.

SENATOR LAUTENBERG: What is the timetable with expected costs for getting the program underway?

ANSWER: We are proceeding as rapidly as possible with implementation of the RTAP program. On April 29, 1987, the Governors were notified by letter of the program and were provided a table indicating the FY 1987 RTAP allocations to each State. The Governors were also told that funds were available and applications would be acted upon for those States that wished to apply in FY 1987. RTAP program guidance and application instructions for the State progam have been drafted and are expected to be issued shortly. A grant application for funding of the National program, through a consortium effort, is being processed.

There are no additional costs to UMTA in implementing the RTAP program. All activities are being undertaken through existing UMTA staff who have been assigned responsibility for various elements of the RTAP program.

SENATOR LAUTENBERG: In what areas does UMTA believe that rural operators need the most assistance?

ANSWER: The responses we receive from State agencies and rural operators indicate that the greatest need is for "hands on" training and technical assistance in the basics involved in managing and operating rural public transportation systems. The following are frequently mentioned as areas where training is needed: management, including personnel management, finance and accounting, use of computers, marketing, fundraising, coordinating with local human service agencies, and contracting with the private sector; and transit operations, including areas such as driver safety, maintenance, passenger assistance, and vehicle specifications.

States and operators cite the need for training packages or modules on these subjects so that the training can be administered locally or without having to travel long distances. Such training materials could be in the form of manuals, self-taught courses, or video tapes. Useful technical assistance is cited as peer-to-peer on-site assistance, state or regional workshops on particular topics, or circuit-riding technical experts in a certain area.

SENATOR LAUTENBERG: Does UMTA believe that there is much overlap/duplication of specialized transportation assistance between Federal agencies, i.e. UMTA and Health and Human Services? (Please elaborate on the answer).

ANSWER: Both UMTA and DHHS provide funds that are used for similar kinds of specialized transportation services. UMTA assistance is usually used to establish and support systems or services, while DHHS funding typically pays for or reimburses trips of individual clients to program related services. There is some overlap of target groups - the elderly, handicapped, and the disadvantaged - that may be served in the programs of both departments. For example, within UMTA the Section 16(b)(2) program provides capital equipment for transportation of elderly and handicapped persons. The special services funded by urbanized areas to meet UMTA's Section 504 requirements are targeted to the handicapped. Section 18 rural programs are often coordinated systems that serve more general purpose public needs as well as those of the elderly and handicapped or other special needs groups.

On the DHHS side, the Administration on Aging, the Family Support Administration, the Headstart program, Medicaid, Public Health programs, and the block grant programs all permit funds to be used under certain circumstances to transport clients to medical or other services. However, the decision as to whether to use the program funds for transportation or for other eligible services is usually made at the local level. Thus, there are no transportation line items in DHHS budgets, nor do they usually know whether or not the funds will be used for transportation.

While there is overlap in the constituencies that we serve, it is appropriate that both UMTA and DHHS support specialized transportation services. UMTA resources alone are inadequate to meet the great and varied needs for transportation by the elderly, the handicapped and the disadvantaged. But they do serve an essential catalytic role, providing a skeletal system and a base level of funding to support the development of coordinated services, to serve those individuals unaffiliated with social service programs, and to provide administrative and technical assistance. On the DHHS side, transportation is an important support component in the delivery of human services, and is an appropriate responsibility of those programs.

The current coordination initiative by the two departments is aimed at making sure that programs of both departments are well coordinated and that the limited funds available are used in the most cost-effective manner possible.

UMTA OPENING STATEMENT

SENATOR LAUTENBERG: In your opening statement, you remark that excess buses remain a significant issue (12,000 excess buses costing $1.8 billion). How did this situation develop?

ANSWER: The build up of the number of excess buses in the U.S. mass transit fleets is the result of many factors, among which are the following:

1. Acquisition of additional buses for planned service expansions which for a myriad of reasons may never had been fully implemented, or if completed, the service was later abandoned or reduced due to lack of expected patronage.
2. Reduction of service by grantees due to loss of ridership initiated by the decrease in the price of motor fuel, resulting in transit patrons switching to private auto transportation.
3. The failure of local governments to meet increased transit operating costs with additional subsidies has resulted in service cut backs, and in turn, excess buses.
4. Combinations of the above items resulting in decreased patronage together with high level or increasing operating expenses forcing grantees to raise basic fare structure. As always, this is followed by another reduction in patrons, adding to excess numbers of vehicles.

All of the above in addition to other purely local problems have resulted in the large excess non-operating bus fleet nationwide.

SENATOR LAUTENBERG: What Federal funds were spent on above average needs for spare parts and excess equipment?

ANSWER: It is not expected that funds were spent on above average needs in any but a very small number of possible instances. The funds that were spent, were distributed under specific guidelines but following actions as stated in the previous questions led to the large amount of excess equipment.

SENATOR LAUTENBERG: What can UMTA and Congress do about this situation?

ANSWER: UMTA will continue to monitor the spare ratios of the grantees bus fleets and to take appropriate action to have the spare ratios brought within the 20% limit of the previously issued guidance. In addition, UMTA will make certain, as has been done in the past, that grant applications for new buses will not result in grantees fleets exceeding the spare ratio and norm of 20%. No further congressional action is necessary.

COMBINED BUDGET

SENATOR LAUTENBERG: Page 22 of the prepared statement states that "...Currently states and localities spend less than 1 percent of their combined budgets on transit."

For the record provide a breakdown by State the contriubtion to the combined transit budget by source Federal, State, local both absolute dollars and percent of the total.

ANSWER: The $10 billion in transit operating budgets in 1984 were financed 44 percent ($4.4 billion) through operating revenues, 9 percent (903 million) by Federal assistance and 47 percent ($4.7 billion) by State and local subsidies. Breakdowns of these sources by State in absolute dollars and percentages are attached.

Estimated combined State and local government direct expenditures minus Federal intergovernmental transfers totalled $532 billion in 1984. This amount includes both general and trust fund expenditures by States and localities. As indicated above, State and local operating subsidies (including dedicated--or trust fund--expenditures) for transit totalled $4.7 billion. Thus, State and local governments spent 0.88 percent of their total own-source budgets on transit subsidies. The comparable proportion in 1981 was 0.64 percent, according to the Bureau of Economic Analysis of the Department of Commerce.

The amounts shown are based on aggregate national data from UMTA's Section 15 reporting system and from national aggregate U.S. Bureau of Census, Census of Governments data reported in the Statistical Abstract of the United States, 1986, (pp.270-271). Unfortunately, however, data are not available at this time for reporting total State expenditures (general plus trust fund expenditures minus Federal transfers) by State.

Senator Lautenberg: Provide for Fiscal years 1985, 1986 and estimated for 1987 a breakdown by State the contribution to the combined transit budget by source Federal, State, Local both absolute dollars and percent of the total.

ANSWER: The section 15 data necessary to calculate the transit budget by Federal, state and local source is only available up to 1984.

FULL-FUNDING AGREEMENTS

SENATOR LAUTENBERG: Update the Committee on the status of all Full Funding Contracts now in existence and those contracts not yet entered into but where negotiations have taken place.

ANSWER: The information follows:

ACTIVE
FULL FUNDING CONTRACTS
(DOLLARS IN MILLIONS)

UZA	Issue Date	Funding Source	Project Description	Base Fed. Contract Amount	Funding Thru FY 86	FY 87	FY 88	FY 89	FY 90
Portland (LOI)	3/24/82	IT	Banfield LRT	$145.0	$ 145.0	-	-	-	-
		3		$ 92.8	$ 85.7	$ 7.1	-	-	-
Detroit (LOI)	7/25/83	3	Central Automated	$110.0	$ 110.0	-	-	-	-
		9A	Transit Systems	$ 14.1	$ 14.1	-	-	-	-
		9		$ 33.1	$ 33.1	-	-	-	-
Sacramento	9/28/83	IT	LRT	$ 88.1	$ 72.1	$16.0	-	-	-
		9A		$ 2.4	2.4	-	-	-	-
San Jose (LOI)	6/22/84	3	Guadalupe LRT	$205.8	$ 187.0	$18.8	-	-	-
		9A		$ 1.7	$ 1.7	-	-	-	-
		9		$ 50.2	$ 36.6	$13.6	-	-	-
Jacksonville	2/1/85	3	Jacksonville	$ 15.5	$ 15.5	-	-	-	-
		9A	Automated Shuttle	$ 7.6	$ 7.0	$ 0.6	-	-	-
New York	3/12/86	3	Electrify LIRR	$102.6	$ 102.6	-	-	-	-
San Francisco	3/20/86	3	Daly City	$ 51.9	$ 51.9	-	-	-	-
		9	Turnback	$ 58.0	$ 46.1	$11.9	-	-	-
		9A		$ 2.2	$ 2.2	-	-	-	-
Seattle	5/15/86	3	Bus	$ 45.1	$ 45.1	-	-	-	-
		9	Tunnel	$ 0.5	$ 0.5	-	-	-	-
Wash., D.C.	7/16/86	SH	Metrorail	$391.2	$ 391.2	-	-	-	-
Chicago	7/28/86	IT	S.W. Rail Proj.	$348.5	$ 195.7	$64.0	$44.0	$44.4	$0.4
Los Angeles	8/27/86	3	Wilshire Rail	$401.7	$ 401.7	-	-	-	-
		9	(MOS-1)	$ 87.8	$ 72.2	$15.6	-	-	
		9A		$ 2.8	$ 2.8	-	-	-	-
New Jersey	11/6/86	3	Coast Line	$ 29.8	$ 29.8	-	-	-	-
		9	Electrification	$ 53.9	$ 53.9	-	-	-	-
Philadelphia	11/6/86	3	Frankford El	$ 97.2	$ 97.2	-	-	-	-

San Diego	11/17/86	3 9	East LRT Ext. (11.2 miles)	$ 20.2 $ 38.2	$ 20.2 $ 17.2	- $11.3	- $ 9.7	- -	- -
New York	12/31/86	3	Metro North Commuter Rail	$63.0	$ 63.0	-	-	-	-
New York	12/31/86	3 9	Lexington Avenue LIne	$60.0 $73.3	- -	$60.0 $73.3	- -	- -	- -
New Orleans	3/23/87	3	St. Charles St. Trolley Line	$35.4	$ 2.4	$33.0	-	-	-

STATUS OF FULL FUNDING CONTRACTS UNDER NEGOTIATION

PROJECT	GRANTEE	STATUS
St. Louis Light Rail Project	East-West Gateway Coordinating Council	This full funding contract is in the very early stages of negotiation. Meetings were recently held concerning the Environmental Impact Statement and the appraisals of the real property to be donated as local share. UMTA has informed the Grantee of the basic terms of any full funding contract, and of its major concerns relative to the project.
Tower City	Greater Cleveland Regional Transit Authority	Most of the negotiations concerning this project have been completed. There are remaining issues concerning the scope of the project, and project management.
Southwest Freeway Transitway	Houston Metropolitan Transit Authority	The negotiations are in essence complete. UMTA is completing its review of the scope of the project and other attachments to the contract. It is expected that the contract will be executed shortly.
Metromover Extensions	Metro Dade County Florida	Negotiations were initiated in early 1986. They were suspended in mid-1986 pending the completion of the environmental process. UMTA and Dade County are making excellent progress in this area, and it is expected to be completed soon. The renewed negotiations on the contract will focus on the availability of a dedicated local source of funding for completion of construction and operation of the system.

NEW STARTS

SENATOR LAUTENBERG: Update the charts found on pages 418, 419 and 420 of last year's hearing record. Senate Hearing Report 99-721, Part 2.

ANSWER: The following table provides the information requested:

STATUS OF NEW START EARMARKS

CITY	AMOUNT ($MILLION)	YEAR APPROPRIATED	ACTIVITIES TO BE FUNDED	FUNDING STATUS	COMMENTS
Atlanta	$66.03 91.08	1986 1987	Phase C Construction	FY87 funds not obligated. Local capital funds from dedicated sales tax are committed to project.	$51m will be used to liquidate Letter of No Prejudice and $40m for for Doraville segment.
Buffalo	0.81	1986	The NFTA does not presently intend to apply for these funds. It may later request these funds for the Naval Park LRRT station.	Not obligated. If the NFTA ultimately applies for these funds, local match for designing the station may be sought from NY State. Construction would be performed with private funds.	Grant application has not been prepared.
Houston	52.40	1986	SW Transitway Construction	Obligated. Local funding from dedicated sales tax.	Full Funding contract being negotiated.
	47.0	1987	North Transitway Extension	Not obligated. Local funding from dedicated sales tax.	Grant application has not been received.
Seattle	23.59 67.87	1986 1987	Busway tunnel Construction	FY87 funds not obligated. Local funds provided by sales, motor vehicle and excise taxes plus bonds.	Full funding contract signed May 15, 1986.
St. Louis	10.00 12.92 12.83	1985 1986 1987	Final design and initial construction for LRT line.	Not obligated. Local in-kind match.	Preliminary engineering, including final EIS and appraisal of in-kind contribution is not complete.

CITY	AMOUNT ($MILLION)	YEAR APPROPRIATED	ACTIVITIES TO BE FUNDED	FUNDING STATUS	COMMENTS
Jacksonville	1.80	1985	Automated Skyway Express Extension	Not obligated. Local match would be from State and City general revenues.	Grant application has not been prepared. Starter line under construction.
San Diego	8.30 3.00 8.90	1984 1985 1986	Construction of East Urban LRT from Euclid to El Cajon.	Obligated. Local capital funds from States sales tax are pledged to project.	Full funding contract signed. Project under construction.
Miami	22.50 49.00 36.37 12.0	1984 1985 1986 1987	Construction of Metromover legs to Omni and Brickell	Not obligated. Local match to be provided by special tax district and State of Florida.	Draft EIS is being prepared. Full funding contract is being negotiated.
Los Angeles	12.00 117.00 96.66	1984 1985 1986	Metrorail construction (MOS-1)	FY 87 funds not obligated. Local capital funds are pledged to project by city, State, LACTC, and thru benefit assessment district.	Full funding contract signed. Project under construction.
Denver	6.55	1987	North I-25 Bus/HOV lanes	Not obligated. Local match by RTD (sales tax), State gas tax, city bond issue.	Alternatives analysis underway. Financing plan not yet complete.

TRUST FUND RECEIPTS

SENATOR LAUTENBERG: For the record provide the receipts coming into the mass transit trust fund (by source), for fiscal years 1985 and 1986 and estimated for fiscal years 1987 through 1991.

ANSWER: The following table provides the information on the status of the Mass Transit Account of the Highway Trust Fund.

DEPARTMENT OF TRANSPORTATION
URBAN MASS TRANSPORTATION ADMINISTRATION
MASS TRANSIT ACCOUNT PROJECTIONS
(In millions of dollars)

MASS TRANSIT ACCOUNT	FY 1985 (actual)	FY 1986 (actual)	FY 1987 (est.)	FY 1988 (est.)	FY 1989 (est.)	FY 1990 (est.)	FY 1991 (est.)
Unexpended balance brought forward, start of year......................	1,611,049	2,524,017	3,286,877	3,878,377	4,267,926	4,282,207	4,334,090
Cash income during year, Government receipts:							
Motor fuel taxes................	1,213,740	1,112,654	1,169,000	1,300,000	1,321,000	1,335,000	1,357,000
Interest on investments.........	206,226	282,769	320,500	334,500	341,400	321,200	303,400
Total annual income...........	1,419,966	1,395,423	1,489,500	1,634,500	1,662,400	1,656,200	1,660,400
Outlays:							
Discretionary Grants (Trust Fund)........	506,998	632,563	898,000	808,000	820,413	637,912	387,218
Formula Transit Grants (Trust Fund)..........			0	436,951	827,706	966,405	1,170,372
Less: Total outlays.......................	506,998	632,563	898,000	1,244,951	1,648,119	1,604,317	1,557,591
Unexpended balance brought forward, end of year......................	2,524,017	3,286,877	3,878,377	4,267,926	4,282,207	4,334,090	4,436,899

USE OF SECTION 9 FUNDS

SENATOR LAUTENBERG: Update the charts in last year's hearing record on the use of Section 9 funds. Senate Hearing Record 99-721, Part 2, pages 437 and 438.

ANSWER: The information follows:

FY 1986 Section 9 Obligations
By Category
(In Millions of Dollars)

Category	Amount Obligated	Percent Of Available Obligated
Operating Assistance	828.3	28%
Capital Assistance	1,149.0	40%
Bus Purchases	(316.0)	
Bus Maintenance facility and bus related	(351.6)	
Rail Modernization	(351.6)	
New Systems	(129.8)	
	1,977.3	68%

FY 1986 SECTION 9 CAPITAL OBLIGATIONS
BY POPULATION SIZE
(IN MILLIONS OF DOLLARS)

URBANIZED AREA POPULATION SIZE	FY 1986 AVAILABLE	BUS PURCHASES	BUS MAINTENANCE FACILITY AND BUS RELATED	RAIL MODERNIZATION	NEW SYSTEM	TOTAL OBLIGATED	PERCENT OF AVAILABLE OBLIGATED
Over 1,000,000 (30 UZA'S)	1,863.9	212.1	229.7	336.3	124.9	903.0	48%
1,000,000-200,000 (86 UZA'S)	623.6	83.1	90.6	5.0	4.9	183.6	29%
UNDER 200,000 (257 UZA'S)	401.1	20.8	31.3	10.3	0	62.4	16%
TOTALS	2,888.6 (1)	316.0	351.6	351.6	129.8	1,149.0	40% (2)

NOTES: (1) Does not include unobligated Section 9 discretionary funds.
(2) Does not include operating assistance obligations.

INTERSTATE SUBSTITUTE PROJECTS

SENATOR LAUTENBERG: Update the chart in Senate Hearing Record 99-721, Part 2, page 458 on the cost to complete substitute highway and transit projects.

ANSWER: The information follows:

ESTIMATED POST FY 1987 COST TO COMPLETE SUBSTITUTE HIGHWAY AND TRANSIT PROJECTS*

STATE	WITHDRAWAL AREA	ESTIMATED ADDITIONAL FUNDS REQUIRED TO COMPLETE SUBSTITUTE HIGHWAY PROJECTS**	ESTIMATED ADDITIONAL FUNDS REQUIRED TO COMPLETE SUBSTITUTE TRANSIT PROJECTS***	ESTIMATED ADDITIONAL FUNDS REQUIRED TO COMPLETE SUBSTITUTE HIGHWAY AND TRANSIT PROJECTS
ARIZONA	Tucson	255,258	0	255,258
CALIFORNIA	Sacramento	0	(1,193,368)	(1,193,368)
	San Francisco	15,880,804	64,847,466	80,720,270
COLORADO	Denver	16,448,656	0	16,448,656
CONNECTICUT	Bolton to Killingly	255,117,316	231,900	255,349,216
	Hartford-New Britain	319,946,593	11,919,694	331,866,287
DISTRICT OF COLUMBIA	Washington	80,919,132	3,701,802	84,620,934
GEORGIA	Atlanta	60,198,348	0	60,198,348
ILLINOIS	Chicago	397,406,416	217,755,063	615,161,478
INDIANA	Indianapolis	25,182,685	(103,623)	25,079,062
IOWA	Waterlou	155,733,755	10,410,737	166,144,492
MARYLAND	Baltimore	290,773,894	218,364,522	509,138,416
	Bowie to Millersville	61,251,277	0	61,251,277
	Washington	6,160,338	0	6,160,338
MASSACHUSETTS	Boston	53,758,783	6,206,799	59,965,582
	Fall River to Providence	6,629,622	605,994	7,235,616
MINNESOTA	Duluth	5,384,161	2,430,803	7,814,964
	Minneapolis-St. Paul	7,895.408	0	7,895,408
NEBRASKA	Omaha	10,082,300	0	10,082,300
NEW JERSEY	New York City	31,504,680	0	31,504,680
	New York City to Trenton	149,568,986	(200,718)	149,368,268
	Philadelphia	3,662,958	(266,071)	3,396,887
NEW YORK	Albany	969,096	1,331,932	2,301,028
	New York City	1,126,943,990	339,899,259	1,466,843,249
OHIO	Cleveland	59,377,406	23,732,713	83,110,119
OREGON	Portland	55,905,765	8,087,809	63,993,574
	Salem	0	0	0
PENNSYLVANIA	Philadelphia	21,291,904	0	21,291,904
	Pittsburgh	30,061,372	0	30,061,372
RHODE ISLAND	Rhode Island	374,868,896	24,061,266	398,930,162
TENNESSEE	Memphis	143,446,618	22,456,132	165,902,750
VIRGINIA	Washington	4,103,415	0	4,103,415
	TOTALS	3,770,729,832	954,280,111	4,725,009,943

NOTE: FHWA and UMTA are now in the process of preparing a new estimate of the cost to complete substitute highway and transit projects. This is likely to result in substantial changes in the cost to complete for most withdrawal areas. State Governors will be providing new cost estimate information in the latter part of August 1987.

*All amounts are Federal funds.

**Based on costs shown in Revised Table 3 of House Committee Print 100-6 minus estimated apportionments of 75 percent of $740 million and minus estimated discretionary allocations per House Report 99-976 (with proportionate reductions). Where intrastate distributions of discretionary allocations are unknown, statewide earmarking has been proportionately distributed to withdrawal areas based on withdrawal values.

***Based on costs shown in Revised Table 4 of House Committee Print 100-6 minus estimated apportionments of 50 percent of $200 million, minus estimated discretionary allocations per House Report 99-976, and minus estimated reapportionments of returned fiscal year 1986 funds. Negative values occur where estimated funds to be available (apportionned and allocated) are in excess of the estimated cost to complete. Further adjustments to eliminate the negative values (e.g., possible reprogramming discretionary allocations) in individual areas are not shown. This table reflects the current status in each withdrawal area but is subject to change.

OFFICE OF TECHNICAL ASSISTANCE

SENATOR LAUTENBERG: The Office of Technical Assistance has been restructured into four lead programs. Break out the Fiscal Years 1986, 1987 and 1988 by lead program.

ANSWER: The following are actual and projected obligations in the four lead progrm areas for FY 1986, 1987 and 1988.

	Obligations ($ Millions)		
Lead Program	Actual FY 1986	Estimate FY 1987	Estimate FY 1988
Safety	1.3	2.2	
Competition	8.7	4.1	
Financial Reform	1.7	3.4	\1
National Leadership	2.6	.5	
Other	2.3	3.2	
Total	16.6	13.4	10.0

\1 Lead Program split not determined.

COST PER MILE

SENATOR LAUTENBERG: For the record provide the total cost per mile including the Federal share for all New Start projects (including transit ways) funded by UMTA and Rail Modernization and extension projects that added new tracks. Include information, for projects already funded and, if available, for those projects not yet begun but have Congressional earmarks and/or preliminary engineering completed.

ANSWER: The cost per mile has been provided in the attached chart entitled "New Start Costs Per Mile" for all recently constructed New Start and extension projects and those under construction or in final design or preliminary engineering. This information should not be interpreted to reflect an accurate measurement of the cost-effectiveness or merits of the projects. The definition of cost-effectiveness that has been applied to major transit projects is the extent to which an alternative returns benefits in relation to its costs. UMTA uses a cost-effectiveness index, as defined in the May 1984 Major Capital Investment Policy, which is used to assess proposed major capital costs, operating and maintenance costs, travel time savings for existing riders, and annual transit ridership when compared to lower cost alternatives. UMTA feels that this is a more effective measurement than cost per mile.

While we do not have the CE index for all the projects listed in the table, the information developed for those projects evaluated since our 1984 policy is presented below:

Projects That Achieved Threshold:

CITY	TOTAL INDEX
Seattle (Bus Tunnel)	1.44
San Diego (El Cajon)	2.84
Atlanta (South)	3.78
Houston (Southwest)	4.73
Houston (Northwest)	4.86
Atlanta (North)	5.96

Rated Projects That Failed Threshold:

St. Louis (Airport)	9.50
Miami DPM Extensions	15.32
Baltimore (Northeast)	19.50
Columbus (North)	61.14

For a more detailed description on how these indices are determined, refer to UMTA's "Procedures and Technical Methods for Transit Project Planning", September 1986.

UGM-22
5/15/87
SEVIER

NEW START COSTS PER MILE

CITY	CORRIDOR	STATUS*	LENGTH (MILES)	FEDERAL COST SEC 3 (MM'S)	FEDERAL COST OTHER** (MM'S)	EST TOTAL COST (MM'S)	COST/ MILE (MM'S)
HEAVY RAIL							
ATLANTA	NORTH/SOUTH	UC	10.6	$178	$7	$680	$64.15
	EAST EXTENSION	PE	3.1	$124 e	$0	$142	$45.74
BALTIMORE	NORTHWEST ***	O	14.0	$636	$143	$974	$69.58
	NORTHEAST	PE	1.3	$0	$212	$300	$230.77
CHICAGO	SOUTHWEST	UC	9.3	$0	$349	$410	$44.09
LOS ANGELES	WILSHIRE (MOS-1)	UC	4.4	$605	$90	$1,250	$284.09
MIAMI	HIALEAH-CORAL GABLES	O	20.0	$722	$0	$1,200	$60.00
WASHINGTON	GREEN (FT-GB)	FD	7.9		$680 e	$850	$107.59
	GREEN (U ST.-ANACOSTIA)	UC	5.6		$248 e	$310	$55.36
	RED (SS-WHEATON)	UC	3.2		$108 e	$135	$42.19
	YELLOW (KING-VAN DOREN)	FD	3.7	$96 e		$120	$32.43
	GREEN (U ST.-FORT TOTTEN)	FD	2.8	$300 e		$400	$142.86
	GREEN (ANACOSTIA-BRANCH)	FD	6.3	$750 e		$1,000	$158.73
	YELLOW (VAN DOREN-F/S)	FD	3.0	$75 e		$100	$33.33
	RED (WHEATON-GLENMONT)	FD	1.8	$250 e		$310	$172.22
LIGHT RAIL							
BUFFALO	MAIN STREET	O	6.4	$409	$0	$530	$82.81
PORTLAND	BANFIELD	O	15.0	$110	$147	$315	$21.00
SACRAMENTO	NORTHEAST/FOLSOM	O	18.3	$0	$88	$176	$9.62
ST. LOUIS	AIRPORT	PE	17.5	$251 e	$5	$340	$19.43
SAN DIEGO	EAST	UC	11.1	$20	$43	$105	$9.46
SAN JOSE	GUADALUPE	UC	21.0	$205	$45	$405	$19.29
OTHER							
DETROIT	DOWNTOWN (CATS)	UC	2.9	$110	$50	$210	$72.41
HOUSTON	NW BUSWAY (US 290)	UC	13.5	$41	$0	$105	$7.78
	SW BUSWAY (US 59)	UC	8.5	$52	$0	$102	$12.00
JACKSONVILLE	DOWNTOWN (ASE)	UC	0.7	$17	$7	$30	$42.86
MIAMI	DPM (METROMOVER)	O	1.9	$66	$16	$140	$73.68
SEATTLE	DOWNTOWN BUS TUNNEL	UC	1.3	$196	$0	$395	$303.85

* STATUS KEY

O = OPEN
UC = UNDER CONSTRUCTION
FD = FINAL DESIGN
PE = PRELIMINARY ENGINEERING

** OTHER FEDERAL COSTS INCLUDE INTERSTATE TRANSFER, SECTION 9 AND STARK HARRIS (WASHINGTON, D.C.) FUNDS

e = ESTIMATED AMOUNT; FUNDS NOT OBLIGATED

*** 6.2 MILES OF SECTION B SCHEDULED TO OPEN 5/87
ORIGINAL 8 MILES OF SECTION A OPENED FOR SERVICE 11/83

COORDINATING COUNCIL

SENATOR LAUTENBERG: Has the joint DOT/Health and Human Services Coordinating Council met? If so, when and where?

ANSWER: The Joint Coordinating Council, composed of seven members from each department, met for the first time on March 10, 1987, in Washington, D.C.

SENATOR LAUTENBERG: Briefly describe the agenda for their coordinating council?

ANSWER: At its first meeting, the Council discussed its own organizational structure, agreed to meet at least twice each year, charged the staff of both departments with implementing initiatives focusing on coordination in each of the ten Federal regions, and identified four primary issue areas on which to focus its efforts.

SENATOR LAUTENBERG: What has been accomplished to date by this interagency group?

ANSWER: Secretaries Dole and Bowen signed an historic interagency agreement stating the Departments' mutual goals and objectives and establishing the Joint Coordinating Council, which met formally for the first time on March 10, 1987. In addition, there have been frequent meetings and communication between the departments at the staff level, and both Departments now have an ongoing staff working group considering coordination issues. Members of both departments have made presentations on the subject at regional workshops and forums. Constituent groups of both Departments, including States and local transportation providers, have expressed appreciation and enthusiastic support for the current Federal initiative to promote coordination. A series of regional initiatives is being implemented to carry out the goals of the agreement. A Federal Working Group will be established in each Federal Region.

SENATOR LAUTENBERG: What is planned for the Council for the coming year? (Goals, products, etc.)

ANSWER: The Council will meet again in October, 1987. At that time it plans to review the experience of the regional initiatives currently being implemented, and address any specific questions which emerge from them. The four issue areas identified for particular attention by the Council, and implementation in the Regional initiatives, are: identification of Federal barriers to coordination, information dissemination and the sharing of best practices, state coordinating mechanisms, and opportunities for participation by the private sector.

SENATOR LAUTENBERG: In UMTA's review, what do you see as the administrative, regulatory and/or legislative barriers to the effective coordination of transportation services for the elderly and handicapped?

ANSWER: The Council is actively soliciting specific examples of Federal barriers to coordination. A major goal of the Regional initiatives is to surface such problems so that they can be examined in detail. At its next meeting, in October, 1987, the Council looks forward to addressing specific barriers brought to its attention through the regional initiatives or other sources. In the past many perceived barriers have been found to be the result of myths and misperceptions about Federal regulations. The very existence of the Coordinating Council has already been seen as helpful in itself in breaking down attitudinal barriers, because it provides evidence of Federal encouragement of coordination.

SENATOR LAUTENBERG: The Department of Education and Labor also fund transportation services. Are they or should they be included in the coordinating council?

ANSWER: Only the Departments of Transportation and Health and Human Services are currently formal signatories to the agreement. DOT staff, however, have held preliminary discussions with staff from the Departments of Education and Agriculture, and DHHS staff have expressed interest in working more closely with the Department of Labor. The Federal Working Groups established at the regional level are being encouraged to include members from other Departments in addition to DOT and DHHS where appropriate. Based on the experience gained through the Regional Inititiatives and other Council activities, consideration may be given at a later date to formalizing participation of other Departments through membership in the Council.

SENATOR LAUTENBERG: How is the council funded and supported?

ANSWER: Existing staff from both Departments have been assigned to staff working groups. Specific projects to support Council activities will be considered for funding on a case by case basis from existing departmental programs. In addition, coordination activities at the State and local level, such as planning, technical assistance, and administrative support, are eligible expenses of many ongoing programs of both Departments.

RURAL TRANSPORTATION

SENATOR LAUTENBERG: Last year in testimony Administrator Stanley suggsted that Section 18 funding was less than adequate for nonurbanized providers. Is this still the sentiment?

ANSWER: Yes. We support funding levels that would allow nonurban areas to receive about 5 percent of formula funds.

SENATOR LAUTENBERG: Would UMTA support language similar to that contained in last year's appropriation which provided a higher level for Section 18 than the enabling legislation would have?

ANSWER: Yes, UMTA would support language similar to that in last year's appropriation that would increase the level of funding for Section 18 beyond that which is available through the current legislative formula. In fact, the Administratic..'s FY 1988 budget proposal adds an additional $29 million to the 2.93 percent formula apportionment amount for nonurbanized areas under Section 18. This budget request enables nonurbanized areas to receive roughly 5 percent of all formula funds in FY 1988.

SENATOR LAUTENBERG: Could rural areas efficiently use approximately 5 percent of the appropriated formula funds ($100 million)?

ANSWER: Yes, rural areas could efficiently use 5 percent of the appropriated formula funds, as evidenced by the obligation rates in recent years. The demand for Section 18 funds has significantly exceeded the annual appropriations for the last three years. Since FY 1984, obligations under the Section 18 program have averaged approximately $111 million per year, even though the appropriations during those same years have averaged slightly under $70 million annually. Such obligation levels were possible as States used up their carryover balances and utilized the Governors' authority to transfer unused Section 9 funds to the Section 18 program. This level of demand for Section 18 funds by the 1000 rural and small urban systems now receiving funding is expected to continue, even though the overall amount of funds available each fiscal year (carryover, Section 9 transfers, and formula apportionment) has been declining.

SECTION 310 REPORT

SENATOR LAUTENBERG: What has UMTA done in response to last year's report language that directed that data on rural and specialized transportation be included in the Section 310 report to Congress?

ANSWER: The results from the Rural America study of rural and specialized transportation are fully incorporated in the forthcoming Section 310 report to Congress.

SENATOR LAUTENBERG: Will rural data be included in the next Section 310 report?

ANSWER: The Rural America study of rural and specialized transportation will be used in the forthcoming Section 310 report to Congress. For subsequent Section 310 reports and other purposes, we intend to use the Rural Transportation Assistance Program (RTAP) to collect additional information on rural and specialized transportation.

SENATOR LAUTENBERG: When will the next Section 310 report be Available?
ANSWER: The Section 310 report is currently undergoing final review and soon will be transmitted to Congress.

SENATOR LAUTENBERG: What is the current status of the database developed by Rural America regarding recipients of Section 18 and Section 16(b)(2) grants?
ANSWER: Work on the database has been completed and a report published in June 1986.

SENATOR LAUTENBERG: Is UMTA or Rural America maintaining, updating and/or expanding this database? If not, why not?
ANSWER: Neither UMTA nor Rural America are still working on this database. We are quite pleased with the contents of the final report produced by Rural America and believe that it presents a good picture of the universe of UMTA rural and specialized grant recipients. We are now exploring other means of obtaining information on specialized operators not receiving UMTA assistance and on getting additional information on the efficiency and effectiveness and other performance characteristics of all rural and specialized operators. For example, we are exploring developing a voluntary method whereby the reports which many States now receive from rural operators as part of their management of the Section 18 program could be collated and combined to develop an improved picture of rural transit performance.

SENATOR LAUTENBERG: Does UMTA expect to spend RTAP money on developing rural data for the Section 310 report?
ANSWER: Plans for use of the RTAP funds do not call for any expenditures on data collection in the first year. The bulk of the funds are to be granted to the States to use in establishing their own training and technical assistance programs. Some of these funds could be used by the States at their discretion to develop better information on rural and specialized operators.

The remaining funds are to be used to establish a national rural training and technical assistance clearinghouse. First year activities are focused at getting the program set up and operating. In later years, it may be possible to include activities to develop a better information base on rural operators.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

PROJECT MANAGEMENT OVERSIGHT (GENERAL QUESTIONS)

SENATOR D'AMATO: What is the status of UMTA's current PMO program? How many PMO firms are under contract to perform this work for you, and which projects are they assigned to review?

ANSWER: UMTA first retained outside contractor support to assist in the review of on-going major construction projects in 1983 when problems were discovered on the Miami rapid transit project. Discretionary Section 8 funds were used for this exercise.

Since that time, PMO has become a standard management tool at UMTA. Initially, various sources of special studies, research and other funds were used for the program. The FY 1986 Appropriations Act, however, first gave us the authority to spend program funds directly for this activity.

A competitive procurement was undertaken in 1985, and as a result 10 qualified firms were retained as a "stable" of support contractors. This procurement was for a total dollar level of $20 million, with approximately $2 million available for each contractor. Contractors are assigned various tasks under their contracts as needed; considerable attention is paid to assuring that a contractor who is assigned to oversight duty on a particular project has no real or apparent conflicts of interest with the project and that grantee.

At the present time 9 of the 10 contractors are actively working on 14 separate assignments that involve twenty-three different projects. These projects are listed below. In addition, 3 contractors are still at work under arrangements made before the passage of the FY 1986 Appropriations Act and our ability to use capital program funds for the PMO activity. These projects are also identified below.

Our newly passed authorization Act gives us permanent authority to draw off 1/2 of 1 percent of program funds for PMO work; we believe the program is off to an excellent start, and plan to give it suitable emphasis among our project management activities. As with preventive medicine, it may not be possible to list all the program's accomplishments since they will necessarily involve precluding problems from developing in the first place. Per the new authorization Act, we will soon be issuing an NPRM to formalize the program.

- Bay Area Rapid Transit's Capacity Expansion Program
- Jacksonville's People Mover
- Seattle's Transit Tunnel Project
- New Orleans' St. Charles Rehabilitation Project
- San Juan's Agua Guagua Project
- San Diego's Light Rail Project
- Los Angeles' Metro Rail Project
- Washington D.C.'s Metro Rail Project
- Philadelphia's Frankford Elevated Rehabilitation Project
- Chicago's Southwest Transit Project
- St. Louis' Light Rail Project
- Houston's Southwest and Northwest Transitways Projects
- Miami's People Mover Extension Project
- New Jersey's Coast Line Project and the following New York projects:
    - 8th Avenue Rehabilitation
    - 2nd Avenue Tunnel
    - 63rd Street Tunnel
    - Archer Avenue Tunnel
    - Lexington Avenue
    - Park Avenue
    - Long Island Electrification
    - Long Island Yard Project

Projects with PMO firms assigned before the FY 1986 Appropriations Act:

Miami's Metro Rail (work complete)
Sacramento's Light Rail Project
San Jose's Light Rail Project
Detroit's People Mover Project

SENATOR D'AMATO: P.L. 100-17 requires UMTA to prepare regulations to implement this program, as well as to define "major capital project." When will these regulations be ready?

ANSWER: The draft regulation is expected to be ready in June.

PROJECT MANAGEMENT OVERSIGHT (NEW YORK PROJECTS)

SENATOR D'AMATO: To date, what has Fluor concluded regarding the MTA's plans for the 63rd St. Subway Tunnel?

ANSWER: Fluor has made an extensive review of the 63rd St. tunnel and concluded that there are several structural, mechanical and electrical problems that need to be resolved before the tunnel is opened for revenue service. Also, of concern to Fluor is the adequacy of the ventilation system to remove smoke and fumes in case of a fire emergency. At the present time, NYCTA is in the process of completing wrap-up design work for the 63rd St. tunnel as well as 2nd Avenue and Archer Avenues tunnels.

SENATOR D'AMATO: Has Fluor reached any conclusion regarding the safety of the "G4" girder which had been cut during construction?

ANSWER: Fluor has requested NYCTA to provide information that shows tne existence of loop reinforcing steel in the columns at the end of girder "G4" and to develop a procedure for repairing the welds in girder "G4".

SENATOR D'AMATO: I understand that the MTA and UMTA have been discussing the issue of release of Federal funds now being withheld from the 63rd St. project and the Archer Ave. project. What criteria will UMTA use in making a decision on release of the funds?

ANSWER: MTA informs us they plan to open the Archer Avenue line in December 1988 and the 63rd Street tunnel in October 1989. MTA has also expressed its strong commitment to resolve all issues raised by UMTA and other oversight agencies as part of its wrap-up work on these projects.

It is UMTA's intention to release $19.6 million as soon as assurances are fully in hand that all corrective work has been identified and is programmed. Negotiations will then continue to determine what part of the additional funding requested represents original construction eligible for Federal assistance and what part may be for remedial work to the original structure for which Federal assistance will not be forthcoming. UMTA and the MTA are in full agreement on this general approach and policy, and we are merely awaiting the outcome of detailed evaluations and determinations at the staff level.

SENATOR D'AMATO: What recommendations has Fluor made regarding the Long Island Rail Road's new "Capital Construction Division"

ANSWER: Fluor conducted a survey of the organization, policies, procedures and operations of the "Capital Construction Division" of Long Island Rail Road. This survey was performed in the context of the Hicksville to Ronkonkoma Mainline Improvement Project.

Fluor made the following recommendations:

- Preparation of Project Management Procedures (PMP) has fully occupied the Quality Assurance (QA) group. No QA audits are being performed.
- Preparation, review and acceptance of PMP is 3 to 4 months behind the schedule. Approval of PMP by all concerned LIRR groups will require top management attention.
- QA group does not report directly to the Vice President of the Capital Construction Division.
- The Project Manager has minimum control over Force Account work.
- Force Account work is inspected by the same personnel or group which performs the work and not by the Construction Manager Consultant as are other contractors.
- Force Account estimates should be given an independent check.

SENATOR D'AMATO: Has the LIRR established quality control and quality assurance procedures for major projects (e.g., Main Line electrification)?

ANSWER: LIRR has not established a QC/QA procedure for major projects as of this date. They plan to develop the procedures once the Project Management Manual has been completed.

SENATOR D'AMATO: I understand the LIRR has been slow to draft and implement new procedures. Is it possible for the LIRR to use the Transit Authority's new procedures as a model for creating its own procedures, or must it "re-invent the wheel"?

ANSWER: No, it is not possiblle for the LIRR to simply use the Transit Authority's procedures. In developing procedures, the LIRR would look to the Transit as well as other organizations for examples of how procedures are written but in the end the LIRR's procedures must reflect characteristics unique to its organization.

PUBLIC POLICY ISSUES

SENATOR D'AMATO: How are transit projects any more "local" than federally-aided water projects, agriculture subsidies, etc.

ANSWER: The Department agrees that transit serves the poor, the elderly and the handicapped. Indeed, providing a basic level of mobility is the justification for the Federal interest in the system. However, as the proportion of transit dependent using the system decreases, so should the Federal involvement. With regard to water projects, it is true that they often have limited Federal interest and that the share paid by beneficiaries should be increased. Agricultural subsidies, because agricultural commodities trade in world markets, are much less of a "local" issue. In any case, this Administration has urged reducing Federal spending in these and many other areas, transit has not been singled out.

CHARTER BUS SERVICE

SENATOR D'AMATO: I have heard from many medium and small-sized communities in upstate New York concerning your new regulation on bus charter service. It is my understanding that this rule will stop transit properties from delivering incidental charter service to groups within their service areas. While the resulting financial loss is of concern, they are principally concerned about the effects on community service. Since many big charter operators are not interested in small, in-town jobs, how will local communities cope with this rule?

ANSWER: I am convinced that the new charter rule will not leave any community in the lurch when it comes to meeting its needs for charter service.

First and foremost, the rule allows Federally assisted transit properties to provide service with

Federally assisted equipment when there is no willing and able private operator to meet the needs. Any such agency wishing to provide charter service may schedule a hearing annually to determine if there are willing and able private operators to meet the needs.

Second, any public agency may provide charter service without any restrictions if no Federal assistance is involved in the provision of service. Third, the rule provides that a private operator may contract with a grantee for the provision of charter service when the private operator's demand for service exceeds its capacity. The rule also allows a grantee to make accessible equipment available when a private operator has a request for service requiring accessible equipment but is unable to provide such equipment.

Last, UMTA realizes that the charter market in rural areas is not as developed as it may be in larger urban areas. Therefore, UMTA created an exception to allow its grantees to operate charter service when the private operators are located too far from the site of the charter or when the State has imposed certain minimum duration requirements on private operators which do not apply to public operators.

These provisions serve as a safeguard to ensure that no consumer will be deprived of charter service.

SENATOR D'AMATO: Isn't it better for the consumer and the general public if mass transit systems and the charter companies were to compete for business on an incidental basis as the law currently allows?

ANSWER: UMTA believes free and open competition in any industry generally results in the highest quality product for the lowest possible price. However, UMTA does not believe that publicly assisted charter operations represent either free or open competition. Subsidized competition is unfair competition. Selective use of public subsidies distorts a competitive environment that is fair and equitable. Congress certainly did not make Federal subsidies available to underwrite charter services, especially when those needs are being adequately addressed by the private market place.

UMTA's previous charter regulation was designed to permit charter operations on an incidental basis. UMTA's data suggests that its grantees have not developed tariffs which reflect the true cost of operations. UMTA's data indicates that on average, grantees only seek to recover the "out-of-pocket" cost of operating charter service. Since UMTA assistance is often in the form of a grant for the purchase of capital equipment (vehicles and facilities), it has been easy for grantees to ignore these costs. Therefore, UMTA's grantees have not been competing with private operators on a fair and equitable basis.

Since economic regulation is difficult to enforce, and since non-mass transportation use of capital assets reduces the useful "mass transportation" life of the assets, UMTA decided that the Agency should restrict the ability of its grantees to operate charter service to those cases where they are truly the provider of last resort. UMTA believes that this approach preserves UMTA assisted assets for UMTA related uses, while ensuring that the consumers will not be deprived of needed charter service.

QUESTIONS SUBMITTED BY SENATOR WEICKER

CONNECTICUT GRANT APPLICATION

SENATOR WEICKER: Connecticut submitted a request to the Urban Mass Transportation Administration for a Section 3 discretionary grant for the New Haven Rail Line in June of 1985 and a revised request in April of 1986. It is my understanding that there are still Fiscal Year 1986 funds available for this program. What is the time frame for awarding these grants:

ANSWER: The deadline for submitting Section 3 capital grants for consideration during FY 1987 is June 1, 1987. This deadline was announced by Federal Register Notice issued on April 28, 1987. At that time, all submissions, including the CONNDOT request, will be carefully examined and evaluated to ensure the selection of the best projects. This ensures that scarce Section 3 funds are distributed in a prudent, rational manner according to consistent criteria. Awards for this fiscal year will be made after this evaluation process has been completed.

SENATOR WEICKER: Secondly, can you tell me when the award will be announced for the group of proposals in which the Connecticut request is included?

ANSWER: It is expected that the awards for this fiscal year will be made after the evaluation process is completed, but certainly prior to the end of the fiscal year.

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

STATEMENTS OF:

CARMEN E. TURNER, GENERAL MANAGER

RALPH L. STANLEY, ADMINISTRATOR, URBAN MASS TRANSPORTATION ADMINISTRATION

ACCOMPANIED BY:

JON EGBERT, DEPUTY GENERAL MANAGER

WILLIAM BOLEYN, ASSISTANT GENERAL MANAGER FOR FINANCE

FORREST T. GAY, ASSISTANT GENERAL MANAGER FOR DESIGN, CONSTRUCTION AND FACILITIES MAINTENANCE

INTRODUCTION OF WITNESSES

Senator LAUTENBERG. We now invite Mrs. Carmen Turner to the witness table. Mrs. Turner is the General Manager of the Washington Metropolitan Area Transit Authority.

Senator MIKULSKI. I would just like the committee to know that Ms. Turner gets very high marks from local government and state government for her responsiveness, her efficiency in running a scandal-free department, and when you are writing a lot of contracts I think you would understand the high marks she has gotten.

Senator LAUTENBERG. It is not an easy job, Senator, especially in the Washington area when everybody loves finger-pointing. That is the best game in town.

So Mrs. Turner, take that compliment, treasure it, record it, and make sure that Senator Mikulski confirms it in speeches around the community as well.

Anyway, we welcome you here, Mrs. Turner. We have invited Mr. Stanley to join you so that we can hear from both of you. We think this is a good way to review some of the problems that we know that you have, and an opportunity for those of us on the committee and our invited guests to ask questions of each of you.

If you would like to, introduce your associates and yourself, and then we ask you to give, if you would, consolidated testimony so that we can move to those matters that concern us. Of course, your full statement will be included in the record. So, welcome.

STATEMENT OF CARMEN E. TURNER

Ms. TURNER. Thank you. Good morning, Mr. Chairman, members of the committee, and Senator Mikulski. Let me introduce the Metro staff that is here with me this morning. We have John Egbert, our Deputy General Manager; William Boleyn, our Assistant General Manager for

Finance; and Forrest T. Gay, our Assistant General Manager for Design, Construction and Facilities Maintenance.

I am very pleased to have an opportunity to be here this morning. I have a special relationship this morning. Mr. Stanley and I were both born in New Jersey. My parents are in Essex County, NJ.

Senator HARKIN. What town?

Ms. TURNER. Montclair.

Senator LAUTENBERG. My hometown.

Ms. TURNER. Wonderful.

Mr. STANLEY. I quit. [Laughter.]

Senator LAUTENBERG. Give the General Manager whatever it is that is needed. And tell everybody back home what you got today.

Ms. TURNER. The rest of my family are in Bergen County, NJ. So I feel a close association this morning and I am pleased to be here. Mr. Stanley and I were born in the same hospital in Teaneck, NJ. So I know this is all going to go well.

Senator HARKIN. What are your Iowa connections now?

Ms. TURNER. I am sorry?

Senator HARKIN. I say, what are your Iowa connections?

Senator LAUTENBERG. You are not the chairman. When you are chairman they will have Iowa connections. [Laughter.]

Ms. TURNER. Mr. Chairman, I would like to present a consolidated statement this morning. I do want to very quickly go through and set a framework for this testimony. I would like to provide the committee this morning with a short status report on Metrorail, then the justification for our fiscal year 1988 request, and then respond to a request from the committee for the submission of a funding plan for the remainder of the system beyond the 89.5 miles.

METRORAIL UPDATE

First a brief update on Metrorail. For historical purposes I would like to remind you that the decision to build and to operate Metrorail was made by the federal government, the local jurisdictions, and the Congress in 1950.

Senator LAUTENBERG. Can we spread those charts so that I can see? Maybe put one on that side, if you can, or just move it over there where you are sitting.

Ms. TURNER. Now that action resulted in the passage of the WMATA compact. That compact was passed by the 89th Congress, and forged a partnership between the federal government, the Congress of the United States, and the three signatories, Maryland, Virginia, and the District of Columbia, to build and to operate the regional system of, at that time, some 98 miles.

Construction began in 1969 with an extremely ambitious construction schedule. However, in the ensuing years, as with any other major public works project, we faced many delays that resulted in increased costs.

Some of that was due to double-digit inflation, some of that was due to problems and difficulties with alignment decisions, resulting sometimes in litigation. Some of it was due to our inability to gain access to rights of way. Some of it represented changes in the environment, additional federal regulations, and finally lower appropriations, given the competition for dollars within the transportation pot. And we certainly understand that.

I am pleased to say that in the face of all of this, the Congress and every President has supported the completion of this system in the Nation's Capital through the Stark-Harris authorization. And it is often described, I might say, as America's subway. It is a subway in the Nation's Capital. A monumental system in my opinion for a monumental city.

OPERATING LINES

Today we operate 70 miles of rail revenue service and we recover 70 percent of our costs through revenue. And I just found out this morning that rail ridership is higher than it has ever been. We are third highest in the country. And we believe if this trend continues we will be second only to New York.

I would like to refer to a map that is in my testimony. We also have a map up here that will very quickly describe to you the status of this system. The solid lines, and I believe in the testimony you may find a map also, the solid lines show that portion of the system that is currently in revenue service.

So we now have revenue service from Shady Grove out in Montgomery County coming down through the District and going back out into Silver Spring. That is the red line.

On the orange line, in Virginia, we operate from Vienna on into the District, and then out to New Carrollton in Prince George's County.

On the yellow line we operate from Gallery Place in the District down to Huntington. And on the blue line we operate from Addison Road out in Maryland on into National Airport.

Currently under construction we have some 19 miles: the red line under construction from Silver Spring on out to Wheaton; the yellow line from King Street to Van Dorn in Virginia; and the green line in the District of Columbia from Anacostia to U Street. I am pleased to say that all of the structural contracts have been awarded on that piece of construction. On the outer green line we have construction from Fort Totten on into Prince George's Plaza.

That is referred to as phase 1 of the construction program, and I will get into that more. The second phase of our construction program will take us from Prince George's Plaza out in Prince George's County on into College Park. And that is funded primarily with the fiscal year 1987 appropriation. And finally phase 3 represents construction from College Park to Greenbelt, including the S&I yard there, and that represents the 89.5 mile system. Nineteen miles under construction added to the 70 miles in revenue service.

Now on July 16, 1986, the Authority entered into a full-funding agreement with the administration to bring into revenue service these 19.5 miles, bringing the system to 89.5 miles within the existing Stark-Harris authorization.

I must say that this was a major achievement for this region. There were serious reservations about entering into an agreement on the part of the Authority staff, on the WMATA Board of Directors, and our local jurisdictions, because Congress had authorized and appropriated funds to build this Metrorail system.

FULL FUNDING AGREEMENT

The Metrorail construction project had been underway for over 20 years, and it certainly was not a new start. The system has been and continues to be built with integrity, and to sound and safe engineering standards. So why should we sign a full-funding agreement?

Quite simply, we entered into the full-funding agreement to move our projects. UMTA at that time had withheld our fiscal years 1985 and 1986 appropriated funds. We also entered into it to achieve greater predictability of federal support.

Our guidance from UMTA in 1983 had been that they would support an annual appropriation for Metrorail construction in the range of $250 to $275 million annually. The full-funding agreement requires that the remainder of the rail system be built in operable segments and that the Authority demonstrate that funds are available to bring each operable segment into revenue service prior to the initiation of any construction on that segment. That is a very important point.

This means that for each operable segment, we must assure the administration that funds are available, not only for construction, but for rail cars, farecard equipment, startup, insurance and other ancillary costs that will be required in the out years.

Further, because there are finite dollars in the Stark-Harris authorization, our agreement does not include an extraordinary cost provision. As a consequence, the federal government required us not only to sign a full-funding agreement, but then to have a separate agreement with the local jurisdictions to ensure that if we could not complete this project within existing funds, that they would make up any shortfall.

Briefly described, the operable segment concept functions as follows. The rail construction program funded by the full-funding agreement was divided into three phases, as I have indicated. In 1985 and 1986 appropriations allowed us to take on the first phase of this project.

Additional appropriations in 1987 allowed us to incorporate phase 1 into a second phase and extend the construction project to College Park, MD. In 1988 the appropriation we have requested will allow us to incorporate phases 1 and 2 into phase 3, which will allow us then to build to Greenbelt and meet the 89.5-mile commitment. This is shown on a table in the written testimony, and if you turn to attachment 1 I can quickly go through that for you.

Senator LAUTENBERG. Ms. Turner, whatever you can do to consolidate, because we will have the full text in here. I am afraid that we will run out of time.

FISCAL YEAR 1988 REQUEST

Ms. TURNER. Let me move into the justification for the $250 million, but I did want to at least explain why we are where we are.

We have a chart here that shows the justification for our request for $250 million. And I will point out that this request is based primarily on the full-funding requirement. What you will see here is that in order for us to go to phase 3, based on our most recent cost estimates, it will cost $1.213 billion.

[The chart follows:]

FY 88 APPROPRIATION OF $250M
($Millions)

COST TO COMPLETE	Phase I	Phase II	Phase III			
	808.1	196.6	208.7			$1,213.4
SOURCE OF FUNDS				Phase III 1988		
Federal Share 1985				$ 250.0		
" 1986				216.0 1/		
" 1987				201.0		
" 1988				250.0		
Subtotal					$ 917.0	
Local Share 1985				62.5		
" 1986				54.0		
" 1987				50.3		
" 1988				62.5		
Subtotal					$ 229.3	
TOTAL FEDERAL & LOCAL SHARES						$1,146.3
SHORTFALL				67.1		
PLEDGED FUNDS TO COVER SHORTFALL						
Reprogram FY 84 and Prior:						
Design Outer F & Mid-E Route				17.0		
Outer E Rt. Real Estate Beyond P.G. Plaza				25.4		
Contingency E Grant				24.7		
2/3-1/3 Grant				-		
Contingency B Grant				-		
Subtotal					67.1	
TOTAL PLEDGED FUNDS						67.1
TOTAL FEDERAL & LOCAL SHARES & PLEDGED FUNDS						$1,213.4
UNFUNDED SHORTFALL						0

1. The Fiscal 1986 Federal funds were reudced by $1.0M to finance UMTA's Project Management Oversight Consultant Services.

SUMMARIZING METRORAIL GOALS

Those estimates have been submitted to the project management oversight team for Mr. Stanley. They are reviewing them. They have been reviewed by our consultants and by our engineering staff, and our best understanding of this is those estimates are within 2 percent of the bids that are coming in.

If you will examine that chart you will see that with the federal appropriations including the $250 million for fiscal year 1988 we reach a total of $917 million. If you add to that the $229.3 million in local funds, that brings the total to $1,146.3 million. That represents in order for us to go to phase 3 a shortfall of $67.1 million.

Now our job is to find a way to close the gap between the federal appropriations and the cost to complete. We do that by applying other funds and as a last resort we will go to the local jurisdictions for additional funds under something called an advanced match.

Therefore, as far as the Authority and the local jurisdictions are concerned, we have available now somewhere between $67 and $70 million that we can apply to a $250 million appropriation that would allow us to close the gap and move this construction program to phase 3 and the construction of the Greenbelt line.

Let me summarize very quickly. Our goal is to build and to operate this system. It is to build the system, taking into consideration the changing environment and additional requirements. It is also our goal to make sure that the people of this region, once the system is built, have a system that is safe, reliable and dependable, and that we do that in the most cost-effective way.

We believe that the people of this region and indeed the people of this nation should have all of the benefits that accrue from a rapid transit system in the Nation's Capital. I indicated also that we would submit a very preliminary report on the funding beyond 89.5 miles. We have prepared that report and I believe that you have it before you. I would point out that the report recommends, and proposes, that funding beyond the Stark-Harris authorization be continued in the same manner as funding up to this point.

That concludes my statement, Mr. Chairman. I would be happy to take questions.

[The statement of Mrs. Turner follows:]

STATEMENT OF CARMEN E. TURNER

Good morning, Mr. Chairman and Committee members. It is a pleasure for me to be here today to testify on our program for Fiscal Year 1988. I would like to take this opportunity to thank the members of this Subcommittee for their longstanding commitment to Metro.

RAIL CONSTRUCTION PROGRAM

Construction Status

Before I discuss the FY '88 program, I would like to outline the status of our ongoing construction program. As the map inserted in your testimony shows, we currently have:

- 70 miles in operation,
- 19.5 miles in design or under construction, which will be funded with the current Stark-Harris authorization, and
- 13.5 miles that are planned, which will require a new authorization.

The status of our current construction program is as follows:

Glenmont Line (Red Line)

- The tunnel is complete from Silver Spring to Wheaton. Track installation will begin later this year. This tunnel pioneered a new construction method for us, saving both time and money. The rail line to Wheaton will open in late 1990.

Greenbelt Line (Outer Green Line)

- Construction is well underway on the West Hyattsville rail line. A contract was recently awarded for the West Hyattsville Station.
- Ground was broken for the Prince George's Plaza Station on April 5th of this year.
- The FY '87 appropriation will fund construction which includes the College Park Station and line.

- The FY '88 appropriation will fund completion of the line to Greenbelt and the service and inspection yard at the end of the line.
- Our construction schedule shows revenue operations to Greenbelt in mid 1994. We hope to open the line earlier, provided construction is not delayed.
- As a matter of interest, we are building a commuter rail station on behalf of the State of Maryland, which they are funding. It will be adjacent to the Greenbelt Metro Station and should be in revenue operation in late 1989.

Anacostia (Inner Green Line)

- The tunnels under the Anacostia River are approximately 75 percent complete.
- Major structural work is in progress for the Anacostia Station and line and the adjacent regional parking structure.
- During May 1987, the tunnel boring machine used for the Anacostia River tunnels will be moved into place to bore the tunnels from the Waterfront Station to the Navy Yard Station.
- With the letting of the contract for the Navy Yard tunnels in 1986, every major structural segment of the Green Line from U Street to Anacostia is either complete or under construction.
- Revenue operations between Anacostia and L'Enfant Plaza is scheduled for late 1991.

U Street (Inner Green Line)

- The major structural work at the Mt. Vernon Square-UDC Station is nearing completion and the finish contractor is at work.
- Major structural work is well under at the Shaw Station.
- Excavation work is underway at the U Street Station.
- Revenue operation between U Street and Gallery Place is scheduled for late 1990.

Van Dorn Line (Yellow Line)

- Construction is halfway completed on bridges over Cameron Run, Eisenhower Avenue and Van Dorn Street.

- The Van Dorn Street Station and line construction contract was recently awarded. Groundbreaking ceremonies for the Van Dorn Street Station will be held on May 16th.
- Revenue operation is scheduled for early 1991.

FULL FUNDING AGREEMENT

On July 16, 1986, the UMTA Administrator and I signed an agreement which establishes a program to complete 89.5 miles of Metrorail using the balance of the current Stark-Harris authorization. Under this agreement the "project" is defined as completion of 89.5 miles with the remaining funds available in the Stark-Harris authorization. This means that any cost in excess of the agreement must be borne by the local jurisdictions. There is no extraordinary cost provision in the agreement. Full funding agreements for projects in other cities provide for Federal funding of extraordinary costs if, under certain circumstances, such as high inflation or catastrophic accidents, the project costs exceeds the full funding amount. Under our agreement, the local jurisdictions and WMATA have assumed all of the risk to pay for any costs associated with 89.5 miles which exceed the funds authorized under Stark-Harris.

The Agreement also requires that all construction proceed in operable segments. Under this requirement we must assure the Federal government that all the funds to ready a rail segment for revenue operation are identified and available before work may be initiated on a new segment. This means that the FY '88 appropriation must be sufficient to fund all of the activities associated with an operable segment, including acquisition of rail cars and automatic fare collection equipment, even though some of those funds may not be outlayed until 1990.

The approved program for construction of 89.5 miles was divided into three distinct phases. Each successive phase incorporates all construction activities of the previous phase. The Authority must ensure at each step that adequate resources are identified for completion of the phase undertaken. We cannot proceed to the final phase of construction to Greenbelt without an adequate FY '88 appropriation.

The FY 1985, 1986, and 1987 appropriations and local match were insufficient to completely fund the operable segments through Phase II. Therefore, the Authority pledged resources that had been intended for other purposes in order to satisfy the requirements of the Full Funding Agreement. Section 9 funds from rail and bus rehabilitation projects and local funds intended to match future Federal Stark-Harris appropriations were pledged in order to cover earlier year costs. Funds have also been temporarily reprogrammed from claims reserves, start-up costs and similar items which can be postponed until adequate funds are available. The FY '88 appropriation is needed in order to undertake construction to Greenbelt and to proceed with Section 9 projects and other activities that were previously programmed and are being postponed.

Revised Cost Estimates

We recently completed a comprehensive review of the costs and requirements associated with completing 89.5 miles of the Adopted Regional System (ARS). This review enabled us to provide an accurate and comprehensive estimate to the Project Management Oversight (PMO) consultant retained by UMTA. The cost to complete through Phase III (89.5 miles), based upon the revised estimate, is $1,213.4 million. Our analysis also found that on the average, the bids we are receiving fall within two percent of our estimates.

While it is extremely difficult and time consuming to collect and correlate information on the $1.2 billion construction program at the level of detail required by the PMO, we are pleased to report that that task has been accomplished. We have now updated all cost estimates, based upon the most recent system requirements and other factors such as, the current costs of materials and the construction bidding climate. The revised cost estimate will also provide us with a baseline that allows us to monitor costs from this benchmark. Attachment 1 compares our revised estimate with the Financial Plan for Phase II, which we submitted to UMTA in accordance with the Full Funding Agreement.

The revised total cost estimate has not changed substantially from the previous one. Experience with the recent openings to Shady Grove and to Vienna shows that initial ridership has been higher than our projections. Given this experience, additional cars are required to maintain the same level of service to our passengers provided there is no increase in system ridership. Thus, as prudent managers, we have included an additional requirement of 18 new rail cars in our revised cost estimates. The additional $21.6 million for the procurement of these cars has been partially offset by other revisions to our estimates.

Phased Construction Program

Let me take a few minutes to discuss the three phases of our current construction program.

PHASE I

Phase I, already under construction, extends the Red Line from Silver Spring to Wheaton, constructs the Yellow Line to the Van Dorn Station, includes the Inner Green Line from U Street to Anacostia and provides for the first segment of the Outer Green Line from Fort Totten to Prince George's Plaza. We expect service on the Red Line to Wheaton and on the Green Line from Gallery Place to U Street to begin in 1990. As shown in Attachment 1, the recently revised cost estimates for Phase I is $808.1 million. Phase I is being financed with funds drawn from a variety of Federal and local sources, including a substantial pledging of our Section 9 bus and rail reliability capital program funds, reprogramming of other grant funds and pledging of additional local funds.

When the Administration withheld our FY 1985 and 1986 Federal appropriations for almost two years, we continued to perform the necessary work to ensure that Phase I construction contracts could be awarded as soon as the funds were released. All procurement steps, short of final commitment, were completed, giving us the opportunity to limit the negative impact upon our construction schedule and costs once funds were released.

Since the $392 million of FY 1985 and 1986 Federal funds were released by UMTA for this phase, $336 million has been encumbered (obligated or committed). We expect to have virtually all of the released funds encumbered by the end of calendar year 1987.

PHASE II

Congress appropriated $201 million for Metrorail construction on October 18, 1986. This appropriation allows us to progress to Phase II of the rail construction program by adding an operable segment on the Outer Green Line that extends from Prince George's Plaza to College Park. The recently revised cost estimate to complete through Phase II is $1,004.7 million.

FY 1988 REQUEST FOR $250 MILLION (PHASE III)

I am here today to request an appropriation of $250 million to proceed to Phase III of the Metrorail construction program in FY 1988.* Implementation of Phase III incorporates all of the construction in Phase II and will complete the Outer Green Line to its terminus at Greenbelt.

Completion of the segment from College Park to Greenbelt will bring Metrorail to the Capital Beltway serving the U. S. Route 1 and I-95 northeast corridor and provide a connection to the commuter rail station to be built for the State of Maryland at the Greenbelt Station.

The extension of the Green Line from College Park to Greenbelt includes track and way construction, the Greenbelt station and a service and inspection yard at this terminus of the Green Line. The yard is a significant requirement because it provides rail car storage and maintenance facilities to make the line functional. Since it will be the only yard serving the Green Line within the 89.5 miles, we have enhanced this facility over previous plans to assure full capability. The yard at the other end of the line, Branch Avenue, when fully built, will be less complex than originally planned in order to conserve construction dollars.

As Attachment 2 illustrates, while the total cost to complete Phase III is $1,213.4 million, there is only $1,146.3 million in available Federal and local shares, assuming a $250 million Federal appropriation in FY '88. Even with a $250 million appropriation, we face a shortfall of $67.1 million. To meet this shortfall, we propose to reprogram funds from prior year grants. Were the Congress to appropriate less than our request we would have to pledge already reprogrammed Section 9 funds and possibly seek advanced FY '89 local match from local governments to meet the operable segment requirement.

The appropriation we are requesting will allow us to proceed with bus and rail reliability projects which we were forced to delay in order to assure funding for Phase II. It will also allow us to release funds for items such as construction claims associated with prior year construction activities which were temporarily applied to Phase II funding in the expectation of future Federal appropriations.

COMPLETION OF THE 103-MILE SYSTEM

We have a mandate to complete the full 103-mile Adopted Regional System. We greatly appreciate the support that this Subcommittee and the full Congress has consistently expressed for completion of the full 103-mile Metrorail System. Last year, the Senate Appropriations Committee Report language accompanying the FY '87 DOT appropriations bill requested WMATA and UMTA to submit a program for constructing the remaining 13.5 miles of the system. I am pleased to transmit a program to build the full 103-mile system to you today.

Since its inception, construction of the Metrorail system has proceeded within the context of an agreement among the participating jurisdictions and with the understanding and support of the Federal government, which presumed the construction of the full Adopted Regional System. Many areas of the region have contributed to the construction of the system in the expectation that their lines would be built. Not only does this agreement form the basis for a political coalition, it also represents the results of a transportation planning process begun in the 1950s to create an integrated transportation network. Further, the location of rail yards and terminus points was determined strategically to maximize operational effectiveness and minimize operating costs of Metrorail. Thus the 103-mile system is not just a set of colored lines on the map. It is the result of an intensive public participation process, as well as a Federally-mandated alternatives analysis, in which land use, highway and transit issues were integrated. Construction of the full system is necessary to meet the goals of that process.

Costs and Schedules for Constructing 103-Miles of Metrorail

The remaining 13.5 miles of the 103-mile system includes construction of the final portion of the long-delayed Inner Green Line, which serves the most transit-dependent population of the region. The inner portion would connect U Street Station with Fort Totten Station, the intercept of the Outer Green Line with the Red Line. Construction of this segment would permit through trips from Anacostia to outer Prince George's County employment areas. This line will provide the innercity transit dependent with full access to job opportunities. The Inner Green Line parallels the path of a proposed interstate highway which was abandoned by the community in favor of mass transit.

The southern leg of the Green Line would extend to Branch Avenue, near the beltway, providing an intercept for traffic from southern Prince George's County, a rapidly developing portion of the region. This line will serve two hospitals. In addition the Suitland Station would serve the major U.S. government employment complex in this area. Implementation of the master plan for further development of the Suitland Federal Center is being delayed until the Metrorail station can be built. The Branch Avenue Station would permit convenient access to Andrews Air force Base and the yard at Branch Avenue would provide storage for rail cars.

The Red Line would be extended from Wheaton to Glenmont, including a service yard at Glenmont to enhance operations and reduce operating cost. It would also relieve the traffic impact upon Wheaton, the temporary terminus, that was not originally designed to be a terminal station.

The Yellow Line would be built to Franconia/Springfield where parking facilities and highway intercepts would draw traffic from I-95, I-395 and I-495 increasing capacity and reducing pressure on the highways in that overburdened corridor. As in the case of the Red Line at Wheaton, the temporary terminus at Van Dorn is not suitable for operating for an extended period of time, due to local traffic impacts.

The cost of completing the system depends upon the rate at which funds are made available for construction. The faster it is built, the less it will cost. If construction were funded at $250 million per year (Federal and local), the system would be completed by the year 2002, costing approximately $2.7 billion (Federal and local) beyond the authorized funding for constructing 89.5 miles. Assuming that matching share provisions of the Stark-Harris legislation are continued, Federal appropriations would be $200 million annually, for a total Federal contribution of about $2.2 billion. The local governments would provide in excess of half a billion dollars to support rail construction.

Over the years, the Federal government has followed through on its commitment to construct a regional rail system. Local jurisdictions have also demonstrated their commitment, not only financially, but also by forgoing Interstate Highway construction, by fostering development near Metro Stations and by adopting policies which encourage transit ridership. Many local jurisdictions have made significant contributions to Metrorail construction throughout the region, with the expectation that the entire system would be built. Without continued Federal assistance, local governments will not be able to fund completion of the system. We intend to seek a reauthorization of the Stark-Harris legislation in order to fulfill our mandate to complete the full 103-mile system.

Next year, our FY 1989 request to Congress essentially will exhaust the current Stark-Harris authorization. The remaining Federal funds under the current authorization will finance the costs necessary to make the 89.5 mile system fully operational, including railcars, project management, start-up expenses and other indirect expenses.

FUTURE REHABILITATION AND REPLACEMENT COSTS

Last year the Federal City Council (FCC) completed a major study, using WMATA data, that concluded "...the Washington area will be faced with a large and increasing bill for capital rehabilitation and replacement in the very near future." WMATA has adopted a program to anticipate needed expenditures and to assure the availability of funds to meet those needs.

The program includes continuously updating an equipment and facilities inventory, including predicted lifetime and projected replacement costs. From this inventory a 20 year rehabilitation and replacement program will be developed. To assist the local jurisdictions in meeting the program costs, a depreciation reserve, managed by the Authority, permits contributions on a prospective basis, with return on investments credited to the jurisdiction's account. In addition, WMATA is prepared to issue bonds on behalf of one or more jurisdictions to meet exceptionally large costs, such as rail car replacement.

SNOW

We have learned a great deal this winter about operating in the snow. We experienced very different problems with the blowing snow of January than we encountered with the heavy, wet snow of February.

American Public Transit Association Peer Review

As a result of our experience in the snowstorms we requested the American Public Transit Association (APTA) to establish a peer review team of experts from transit systems in cities which have extensive experience in handling snow to assess all aspects of this problem. The APTA Peer Review Panel concluded:

- No other city experienced the same intensity of snow at the same time of day as did WMATA in the January 1987 snow.
- Faced with the same conditions, other cities would have had severe difficulty maintaining operations.
- The excellent reliability record of Metrorail resulted in the service disruption being viewed as a more serious matter by Washington residents than in other cities.
- Enhanced snow-related equipment is recommended, including third rail heaters modified cover boards.
- A more coordinated severe weather plan, which combines several procedures which WMATA now has in place, should be developed.

Communications

In my opinion, the area in which our performance was most unsatisfactory was communications. This is a problem that we have addressed and are correcting. To enhance our public communications, one of my first actions was to direct our operations staff to designate one full-time person in the Operations Control Center to provide passenger information. This person is responsible for communicating with passengers in the system and with our Marketing and Public Affairs personnel, who in turn will communicate directly with the public through the news media.

Equipment Program

In consultation with our General Engineering Consultant, Deleuw, Cather & Co., we have developed a three-year, $28 million "winterization" program. This program provides for heating approximately sixty-six percent of the exposed third rail and is augmented by modifications to the coverboard, heaters and switches and the procurement of other vital snow removal equipment. The program is carefully balanced to assure the maximum use of a combination of snow removal devices and technologies in the most cost-effective manner.

In view of Secretary Dole's gracious offer to assist us both technically and financially in resolving the third rail icing problems, we have requested from UMTA a FY '87 Section 3 grant for $6.75 million for the first phase of third rail de-icing and related projects. We have also asked for a Letter of No Prejudice, so that we may proceed in an expeditious manner to assure that the heaters are in place by next winter. To date, we have not received the Letter of No Prejudice.

OPERATIONS

Both Metrobus and Metrorail ridership and performance continued to improve in FY 1986. FY 1986 Metrobus ridership was recorded at 137 million trips, an increase of five million trips, or 3.78 percent, from FY 1985. This is the highest level of annual ridership since FY 1981. This ridership increase occurred despite the fact that Metrobus service in the Huntington area was turned over to the Fairfax Connector in September 1985.

Metrorail ridership for FY 1986 was 116 million passenger trips, an increase of 15.3 percent, or 15.4 million trips, from FY 1985. Increases in Metrorail ridership were demonstrated on a systemwide basis, with the upper Red Line showing larger growth than the rest of the system. The opening of the Orange Line to Vienna on June 7, 1986, has attracted more ridership than originally projected. Ridership on this segment exceeds 32,000 trips per day, a full 33 percent above our estimates.

In FY '86, bus availability reached 89.5 percent, an improvement of 1.5 percent over the previous year. The improvement noted over the prior year is the result of improved maintenance practices, including the completion of a higher percentage of scheduled inspections and the benefits of the fluids analysis program.

The number of rail cars in peak service averaged 99.5 percent for FY 1986, 0.1 percent higher than last year's average. At no time during the year was availability less than 99 percent. The efficient use of gap trains, combined with the availability of some extra cars prior to the Vienna opening, has contributed to the success of this indicator.

There was an eight percent reduction in rail passenger injuries per million passengers from FY 1985 to FY 1986, dropping from 2.44 to 2.25 passenger injuries per million passengers. There was not a single injury in FY 1986 caused by a rail revenue accident (train collision, derailment or fire).

OPERATING BUDGET

The financial status of our operating budget continues to improve. We achieved a 53 percent cost recovery ratio for FY 1986. This is more than a full percentage point above our original goal. The Metrobus cost recovery ratio was 38.6 percent. Metrorail recovered 70.5 percent of its costs in revenues. We are confident that revenues will continue to grow in FY 1987 and that we will again have one of the best cost recovery ratios for any major transit system in the country.

The Fiscal Year 1988 budget approved by the Board continues our efforts to hold the line on costs and maintain the Authority's high standards for safety and reliability. I am very proud to say that I believe we can accomplish this and still achieve a 53 percent revenue-cost recovery ratio. Our operating budget costs total $471.4 million with an estimated $248.7 million in revenues.

The jurisdictional assistance required to support this budget is $234.7 million. The local government share includes $27.5 million for debt service, and $2.3 million for depreciation of repairable parts. We are expecting to receive $17.8 million in Federal operating assistance.

CONCLUSION

In conclusion, we are working hard to maintain the momentum of our construction program and to assure that our system operates more effectively under severe weather conditions. In parallel, we need to proceed with important current rail and bus capital projects which will enable us to continue to provide the safe, reliable and comfortable service which the riding public has come to expect. Our request for an appropriation of $250 million will allow us to release bus and rail reliability funds, pursue the construction program at a minimum cost, and meet the requirements of the Full Funding Agreement.

We are continuing our efforts to control our costs and to increase ridership on the system. We are putting in place a program to provide for the replacement of equipment and the rehabilitation of facilities in an orderly manner. We are, in coordination with local governments, preparing to pursue a reauthorization to complete the full 103-mile system. We are acting to meet our fiscal responsibilities in a prudent manner consistent with the trust placed in us by the public, the local and state governments and the Federal government.

I would like to extend our sincere appreciation for the continuing support of the Congress and of this Subcommittee in particular. We are aware of the difficulties you face in balancing the many requests for funding with the severe fiscal constraints required to reduce the Federal deficit. Thank you for giving me this opportunity to testify in support of our request for $250 million for next year.

[ATTACHMENT 1]

COST TO COMPLETE

FULL FUNDING AGREEMENT BUDGET [1]
vs.
REVISED COST ESTIMATES
($Millions)

	Full Funding Budget	Revised Estimate	Difference	Reason for Increase/Decrease
Phase I:				
Construction	$ 643.8	$ 595.8	(48.0)	New estimates based on more detailed design.
Other	153.0	179.6	26.6	Added 18 new rail cars & additional work equip.
Contingencies	0.0	32.7	32.7	Includes standard contingencies to reduce risk of local jurisdictions.
Subtotal	796.8	808.1	11.3	
Phase II:				
Construction	135.0	138.4	3.4	
Other	58.0	45.2	(12.8)	Reduced insurance. Added work equipment and fare collection.
Contingencies	10.0	13.0	3.0	
Subtotal	203.0	196.6	(6.4)	
Phase III:				
Construction	149.4	148.9	(0.5)	
Other	54.0	46.7	(7.3)	Reduced insurance. Added start-up, work equip., and miscellaneous construction.
Contingencies	8.1	13.1	5.0	
Subtotal	211.5	208.7	(2.8)	
TOTAL	$1,211.3	$1,213.4	2.1	

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1. Phase II reflects changes shown in Financial Plan II submitted to UMTA.

[ATTACHMENT 2]

FY 88 APPROPRIATION OF $250M
($Millions)

		Phase I	Phase II	Phase III	Phase III 1988		
COST TO COMPLETE		808.1	196.6	208.7			$1,213.4
SOURCE OF FUNDS							
Federal Share	1985				$ 250.0		
"	1986				216.0 1/		
"	1987				201.0		
"	1988				250.0		
Subtotal						$ 917.0	
Local Share	1985				62.5		
"	1986				54.0		
"	1987				50.3		
"	1988				62.5		
Subtotal						$ 229.3	
TOTAL FEDERAL & LOCAL SHARES							$1,146.3
SHORTFALL					67.1		
PLEDGED FUNDS TO COVER SHORTFALL							
Reprogram FY 84 and Prior:							
Design Outer F & Mid-E Route					17.0		
Outer E Rt. Real Estate Beyond P.G. Plaza					25.4		
Contingency E Grant					24.7		
2/3-1/3 Grant					-		
Contingency B Grant					-		
Subtotal						67.1	
TOTAL PLEDGED FUNDS							67.1
TOTAL FEDERAL & LOCAL SHARES & PLEDGED FUNDS							$1,213.4
UNFUNDED SHORTFALL							0

1. The Fiscal 1986 Federal funds were reudced by $1.0M to finance UMTA's Project Management Oversight Consultant Services.

ADMINISTRATION'S POSITION

Senator LAUTENBERG. Thank you very much, Mrs. Turner. Your presentation was informative and well-organized. We appreciate it and I am sorry that we could not give you more time. The problem is, that is the one thing in addition to money that we are always short of around here.

Mr. Stanley, you heard the request. The administration has requested $130 million for fiscal year 1988 for Metro's capital construction program. In contrast to previous years, when the administration requested zero, how come the administration stepped up to request anything for fiscal year 1988?

[The statement of Mr. Stanley follows:]

STATEMENT OF RALPH L. STANLEY

Mr. Chairman, and distinguished members of the Subcommittee, I am pleased to once again have the opportunity to appear before you to discuss funding issues involving the Washington area Metrorail system. We at the Department of Transportation remain concerned about this project in light of the continuing Federal deficit and the Gramm-Rudman-Hollings legislation. I thus would like to share with you the reasons for our fiscal year 1988 budget proposal under the Stark-Harris authorization. I would also like to explain our efforts to assist the Washington Metropolitan Area Transit Authority and the participating jurisdictions in addressing and developing a funding plan beyond the present authorization.

Briefly, the Administration's fiscal year 1988 budget proposal for Metrorail construction is our best estimate of the Federal funds that WMATA will need to continue their rail construction program without delay. We believe that our budget proposal for this fiscal year, and the additional fiscal years through the final obligations under Stark-Harris, is a reasonable and more than adequate level of funding consistent with WMATA's needs and Federal budgetary constraints.

Last year, before this Subcommittee, I addressed the Department's concerns about WMATA's piecemeal approach to system construction and the lack of priority in completion of operable segments of the system such as the important inner Green Line between Anacostia and U Street. I also described the just completed Federal City Council study of WMATA's local financing and urged that WMATA and its jurisdictions address the cost of completing the planned system as well as the real future costs of maintaining the completed system.

However, I am pleased to advise you that during the past year, last July in fact, the Department concluded a Full Funding Agreement with WMATA which provides for the orderly, prioritized completion of 89 miles of the rail system within the Federal funding resources remaining under the Stark-Harris authorization subject, of course, to future appropriations. Most importantly, the agreement provides assurance that should construction costs exceed WMATA's estimates and the Federal funds available, as has happened in the past, WMATA and the local jurisdictions will bear the additional costs to complete these operable segments.

Specifically, the $391 million of Federal funds approved by Secretary Dole last July will, under Phase One of the agreement, complete construction of the extensions to Van Dorn Street and Wheaton, the inner Green Line from Anacostia to U Street, and the outer Green Line from Fort Totten to Prince George's Plaza, an additional 15 miles of the system. Subject to our review of construction costs and available Federal and local funds, Phases Two and Three of the agreement provide for completion of 4.35 miles of the Green Line to Greenbelt for a total system of 89 miles.

I might add, parenthetically, that these 89 miles of Metrorail system will, when completed, have cost the Federal taxpayers over SEVEN BILLION dollars (including bonds).

As part of our Full Funding Agreement with WMATA, and consistent with congressional direction, we have engaged a project management oversight contractor, a joint venture of Day and Zimmerman/Stone and Webster, to assist the Department in monitoring Metrorail construction with special emphasis on cost estimates and schedule performance.

During our budget presentation to the House Subcommittee on

Appropriations on March 17, 1987, our oversight contractor provided estimated construction costs to complete the 89 mile system by projecting the actual cost experience of bids received for the Phase One program currently under construction. WMATA had not, at that time, provided us with updated cost estimates for either their Phase Three construction program, which would be funded with the fiscal year 1988 appropriation, or for Phases One and Two.

Subsequently, at the direction of the House Subcommittee, WMATA provided on April 7, 1987, their updated and revised cost estimates for the entire three-phase construction program. Our oversight contractor has been reviewing WMATA's estimates but due to the short time available and the complexity of this effort, we are not able to verify or confirm the updated cost estimates at this time.

However, using the figures provided by WMATA on April 7, we are able to reconfirm the adequacy of our $130 million budget request for fiscal year 1988. I wish to submit for the record our preliminary assessment of WMATA's cost estimates and details supporting our fiscal year 1988 budget request.

WMATA has revised their cost estimate to complete the 89 miles to $1.213 billion, which is $10 million more than the amount provided for under the Full Funding Agreement, and which includes some $44 million for activities, such as additional rail cars, which were not included in the Full Funding Agreement that we executed in July of 1986. Indeed, as with their extension of the Adopted Regional System from 101 to 103 miles, we were not advised of or consulted on these system additions nor, I suspect, was the Congress.

However, notwithstanding the increased system cost and these late additions to the project, it is clear that WMATA could undertake the Phase Three construction they have scheduled in fiscal year 1988 with a combination of funds, both Federal and local, which will be available if our $130 million budget request is enacted. Based solely on WMATA's estimates, and I emphasize that we have not completely verified their figures, a total of $228.1 million would permit WMATA to undertake and complete the Phase Three construction program, that is, to Greenbelt Station.

Of the $228.1 million required, $32.5 million would represent the local match for the $130 million Federal appropriation. The balance of $65.6 million could be provided by WMATA's advanced pledge of local matching funds. This is precisely the same funding technique which WMATA utilized in undertaking Phase One under the terms of the Full Funding Agreement. In fact, for that phase they pledged a higher advance local match of $68.7 million.

It is important to note that the advance match technique merely permits WMATA to meet one of the terms of the Full Funding Agreement, that is, to have all funding available to complete an operable segment. In addition, the advance match also allows WMATA to let construction contracts. The actual cash required to pay for such work under Phase Three is not needed until fiscal year 1990 by which time further Federal appropriations under Stark-Harris could be available.

Simply stated, WMATA has demonstrated their willingness and ability to advance construction of Phases One and Two with a flexible funding plan which recognizes the constraints of the Federal budget. I suggest that WMATA need not delay their Phase Three construction program because of any lesser appropriation than their usual, unsupported $250 million request.

Let me now turn to the larger issue of long-term financial planning. During the FY 1987 appropriations hearings, WMATA and the Department were directed to develop a financial plan for the completion of the Metrorail system beyond the 89 miles which can be completed under the Stark-Harris authorization. Previous congressional requests to develop such a plan could not be acted upon because of the lack of an agreed set of financial parameters to use as the basis for its development. In the spring of 1986, thanks to the outstanding efforts of the Federal City Council and the participation of local and State officials, consensus was reached on a set of cost forecasts and the requisite financial planning work could move forward.

We have responded to this congressional interest, and to an earlier explicit request by this Subcommittee, by initiating a financial review of WMATA and the participating local jurisdictions. The purpose of this effort was to create an objective data base describing the current and near term financial condition of the Washington region. It is our belief that the information generated by this study will be useful to the local and State officials responsible for developing a funding plan and equally useful to members of Congress and officials of the Department who will review that plan.

This study, which will be transmitted to the Congress shortly, draws no conclusions as to how WMATA's future construction program would be financed from particular local sources since such decisions are, in our opinion, solely a local prerogative. We can say, however, that the data which was collected reflects a financially strong region, a region which has become significantly stronger in recent years as a direct result of the Administration's economic policies. About 200,000 new jobs have been added since 1981, the total real value of the region's real estate grew by 70 percent between 1981 and 1986, far in excess of inflation, and personal income is at an all time high. Though there are inter-jurisdictional differences, the data is reflective of a region which can indeed take on a greater financial responsibility for WMATA rail construction than in the past.

Like the Congress, we are extremely interested in the development of a financial plan for WMATA. That plan should reflect cost estimates based on the latest engineering, be tightly tied to a realistic construction schedule and be endorsed by all affected parties. The planning process should explore every financial avenue available to this region.

I have already pointed out that WMATA has, to date, and this will continue to be the case through the end of Stark-Harris, received more Federal construction support than the sum total of the funds received for the construction of every other new rail transit system in the United States, those being Los Angeles, Atlanta, Miami, San Francisco's BART, Buffalo, Baltimore, Portland, Sacramento, San Jose and San Diego. WMATA has even received more Federal money than New York has been granted for the modernization of its vast rail system which carries over 3.5 million daily trips compared to WMATA's 450,000 daily trips. If indeed there is a special Federal interest in Washington's rail system, we believe that it has been more than adequately covered.

We are asking only that WMATA and its funding partners develop a financial plan that makes maximum use of the kind of creative public and private financing every other city in the country is being asked to use. These arrangements range from leveraged dedicated local taxes in Atlanta, Dallas, Seattle and Los Angeles, to creative approaches to private financing in Houston and Boston. To that end, we would like to give special recognition and praise to the efforts now underway in Northern Virginia, in which new ways of using the private sector to finance a new Metro station in Alexandria and completion of the Franconia/Springfield extension into Fairfax County are being explored. Why can't these concepts and other similar ones be used to complete the entire Metrorail system?

It is not in WMATA's or anyone's best interests to muddle along until the existing Stark-Harris authorization is exhausted and then come running to the Government for business-as-usual 80 percent Federal money to complete the system when there are clear alternatives available. I know that the region has already begun its financial planning efforts and I challenge them to continue until a plan is developed which maximizes use of its own vast resources. Last year's Federal City Council effort and this year's financial review will be useful in that work, and we are prepared to offer whatever additional assistance as is appropriate.

Mr. Chairman, that concludes my prepared statement. I would be pleased to answer any questions that you may have.

UMTA'S RESPONSE TO WMATA'S LETTER DATED APRIL 7, 1987 - COST ESTIMATES PROVIDED BY WMATA SUPPORTING UMTA'S 1988 BUDGET REQUEST FOR WASHINGTON METRORAIL SYSTEM

The following table, reflecting cost estimates provided by WMATA on April 7, supports UMTA's FY 1988 Budget Request for the Washington Metrorail System:

COST OF COMPLETING SYSTEM COVERED BY FULL FUNDING AGREEMENT (FFA)

WMATA Current (April 7) Cost Estimate*

Phase I	$808.1	
Phase II	196.6	
Phase III	208.7	
		$1,213.4

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*Cost estimate submitted to UMTA on April 7, 1987. These estimates are subject to review by UMTA and its PMO contractors.

Less Costs for Scope Changes not approved and not reflected in Full Funding Agreement (FAA):		
Real estate for Wheaton Parking Garage (may be contributed at no cost)	5.0	
Added parking and bus facilities at Wheaton Station site	4.2	
2% Bid Risk negotiated out of FFA	13.1	
18 Additional rail cars	21.6	
Subtotal: Costs Not Part of FFA		-43.9
Net Cost of Segments Covered by FFA:		1,169.5

FY 1988 APPROPRIATION

Total Requirement for FFA	1,169.5
Less Funds Provided for FFA to date (FY 1987):	
Reprogrammed Prior Year Funds	107.6
Federal Funds FY 1985 through 1987	667.0
Local Matching Funds Same Period	166.8
FY 1988 Funding Requirement	228.1
Less FY 1988 Local Funding Sources	
FY 1988 Local Matching Share	32.5
Pledged Local Funds	65.6
Required FY 1988 Federal Appropriation	$130.0

The FFA required that WMATA and its constituent jurisdictions commit sufficient local funding to allow completion of operable segments of the 89.5 mile system with existing appropriations and local match. For Phase I, WMATA pledged $68.7 million in local funds to allow construction to proceed. Assuming approximately the same pledge for FY 1988 ($65.6 million), an FY 1988 appropriation of $130 million and attendant local match of $32.5 million will allow construction of Phase III to begin because the total amount thus available equals the cost to bring it into operation. It should be noted the pledged local funds would not necessarily be needed to liquidate contract obligations until FY 1990, and future appropriations under Stark-Harris (and local match) may be available to replace them before actual payout.

WMATA's FY 1988 request appears to reflect project scope changes (e.g., additional rail cars and parking) not covered by the FFA and not approved by UMTA. In addition, the WMATA request seems to ignore the availability of reprogrammable funds from prior-year grants.

APPROPRIATIONS UNDER STARK-HARRIS

Mr. STANLEY. Two points in rationale. One was the agreement on the full-funding contract that Mrs. Turner referred to which had been an exception around the country. The WMATA project and a number of others have been dictated by full-funding contracts in a good faith recognition from the administration's standpoint that the limited appropriations under Stark-Harris would be expended on a basis that would not delay the construction.

That was the major reason that we, in preparing the budget, tried to honor an adequate amount of construction funding to continue the program above the zero level that had been recommended before.

I also just want to introduce, Senator, Steve Friedlander, who is on my right, who is the head of the project management oversight team, which we have had on this project for the past year.

Senator LAUTENBERG. How did you derive $130 million a year?

Mr. STANLEY. Our initial determination on $130 million was based on project and cost schedules provided during the more than 2 years we were working on the full-funding contract. We got a handle on costs and on schedules. The Transit Authority for the first time presented us with the operable segments and the sequence with which they would be built.

It was based on those cost estimates, our review of the schedule of those activities, and what we felt was an adequate level to maintain the construction program without causing anything to be canceled or delayed.

RECONCILE COSTS

Senator LAUTENBERG. Obviously there is a disagreement. Are you suggesting in your appraisal of the scope of the job as WMATA sees it that they do not need that much? Is it your view that the job to be done is less in magnitude than proposed?

Mr. STANLEY. Senator, we have agreed, I think, in general on the costs of the 89.5-mile system. I will say, we did not get the cost estimates from WMATA until April 7, after 8 months of requesting them.

At that point we found out that a number of the cost estimates we had relied on during the full-funding contract did not reflect the design and engineering work that had been done, and some of them were significantly outdated. We hope to be able to present the committee with an agreement from both sides on what the cost estimates are. We have reviewed the funding needs with our project management firm, based on the WMATA construction schedule.

The only difference really is not so much how much is needed to complete the 89.5 miles, but when it is needed. One of the concerns we had the day we signed the full-funding contract was that we released, if you include local fundings made available, about $795 million. Of that amount, as of March 31, 1987, there is still a balance of about $500 million not yet under contract.

The issue we talked about a little earlier, which is what we are attempting to do with WMATA, as well other transit authorities, is to ensure that funds are appropriated as close to the construction and actual needs basis as necessary so that we do not have the half billion dollars that Mr. DelliBovi indicated that is available in New York and not under contract.

That is why we felt the $130 million level was more than adequate to maintain the construction schedule, and I think that was confirmed by our project management oversight.

LOWER FUNDING LEVEL

Senator LAUTENBERG. Mrs. Turner, what would be the consequences of $130 million availability that the administration has proposed, in terms of your needs?

Ms. TURNER. Worst case, Mr. Chairman, it could delay construction for a year.

I would like to point out that when we signed the full-funding agreement, we agreed to two or three things. One of which was a predictable level of federal support, and two, once the Congress acted and we submitted a funding plan, the release of those funds. At no point did we get into a discussion about when the funds would be obligated, based on where the construction was.

Now, just let me as a manager explain our dilemma here. We clearly want to move this program. We believe that if the appropriations are transferred to the Transit Authority upon congressional action, we have the flexibility to expedite our programs. The uncertainty of when we are going to get the money clearly limits our ability to take advantage of opportunities for construction.

Granted, in a program of this magnitude the payout is over a longer period of time. But the sole premise when we signed the full-funding agreement was that we would now have this predictability, that UMTA would release the funds based on the approval of a funding plan, and we would be allowed to move this program. That is what we are asking today.

Senator LAUTENBERG. Mr. Stanley made the point that there was some delay in getting the report over to UMTA. Is that a valid concern? I am not looking to find out who is at fault.

Rather, I am trying to understand how we respond to the needs here, and to see if that is a funding level, roughly 25 percent above last year, when in fact we have taken about a 5-percent cut across the board in transportation, which suggests $190 million in rough terms. Can these funds be used within the year? I mean, and you said it yourself, there is competition out there for inadequate funding levels of all kinds of programs.

Can the $250 million or the $190 million be used within these next 18 months, roughly, which start the fiscal year 6 months hence? And had you a sufficient chance to review with UMTA, starting off with the lateness of the report to get a better understanding here?

POSSIBLE SHORTFALL

Ms. TURNER. Senator, it goes back to the terms and conditions of the full-funding agreement. Based on the full-funding agreement, we cannot start construction on a new operable segment until we have demonstrated to the administration that we have all the funds available to bring that segment into revenue service.

So we can not move from College Park on out to Greenbelt until we assure UMTA that we can satisfy the $1.213 billion cost to take this system to 89.5 miles. That is the dilemma. If we had a different funding arrangement, then clearly we could look at different rates of appropriations.

But we have an agreement that says, before we can move to a new operable segment we must demonstrate to the administration that all the money is in place. And that means that we have got to make up the difference between——

Senator LAUTENBERG. Between the $1,146 million and $1,213 million.

Ms. TURNER. That is right.

Senator LAUTENBERG. Yes; the $67 million.

Ms. TURNER. And that is our dilemma. And with $250 million we still have a shortfall.

Senator LAUTENBERG. I understand. But the pacing is there, if the commitment is there, and I assume that any agreement can be modified, if the commitment is there for the full-funding level. If the funds are not required to be appropriated for 1988, can we move along with this thing? Mr. Stanley, do you have a response?

Mr. STANLEY. Absolutely. My view is, given the $130 million request, given what we agree is the cost of the completed project, that if you look at the reprogrammed funds that are indicated there, along with the advanced local match, we are suggesting that we deemed them to have met that condition for fiscal year 1988.

We are perfectly open to talk about fundability in some of the funding, but again I cannot emphasize enough that based on our estimates, which have been confirmed by the PMO, the $130 million would not delay any construction activities. I will say that when the cost estimates that we requested in July 1986 were submitted, and which were not provided until April 1987 after considerable delay, included about $44 million in additional items that were not in the full-funding contract.

So what we are attempting to do, and we will continue to work closely with WMATA, to come to an agreement on cost estimates and it is just a matter of agreeing on what construction needs to take place when.

Senator LAUTENBERG. Could we tell WMATA that if the funding level is less this year than last year that the federal government might be able to help them with that shortfall?

FULL FUNDING AGREEMENT

Mr. STANLEY. The principle, Senator, in the full-funding agreement, is that the balance of the Stark-Harris funds will be appropriated. It is really trying to accommodate the schedule over which those appropriations need to occur, and that has been recognized by our signing the contract.

We feel very strongly that $130 million this year will not be unnecessarily disruptive of that construction schedule.

Ms. TURNER. Mr. Chairman.

Senator LAUTENBERG. Yes, please.

Ms. TURNER. Mr. Chairman, I really do not want to prolong this. I do want to say that we entered into the full-funding agreement in good faith, we have put together a program based on guidance from the administration, and we believe now that that agreement has to be honored.

It is true that the local jurisdictions can put up advanced match. Our estimates show that even if they put up the maximum it will not allow us to satisfy the full-funding agreement and move on to complete Greenbelt.

I would also say, and I just think this is important, our understanding is that the requests for those estimates were sometime in late February or early March, not 8 months. When we talk about the estimates, we are talking about going back and building a $1 billion construction program contract by contract. That is an awesome job.

I am pleased that we were able to put it together and get it to the administration in April.

Senator LAUTENBERG. I am not going to continue to encourage the debate. I would say this, Mrs. Turner, in fairness, full-funding contracts, I think, are probably the condition of every system that is being developed in the country, and we are just under the gun right now.

Certainly the District knows it, and every community, every state across this country is feeling the pinch of inadequate funding. If it is possible to work out the commitments that you need to go ahead and complete, I would urge you to negotiate with UMTA.

I speak for myself, I must tell you, I think it is essential that we have the system up to date as proposed. I think it has changed the opportunity for development in this city enormously. It has changed the opportunity for surrounding communities and states to really use their property and their communities for the kind of life that they want to develop, with residents being able to get into the city.

I think it is a marvelous idea, and you have done one heck of a good job in terms of constructing a very good system. I have used it. Once I get to understand it a little bit better I will even use it more.

But I am going to excuse myself now. Senator Harkin has agreed to chair the committee for the remainder. He wears a double hat here, he is chairman of the very distinguished Subcommittee on the District of Columbia, and he will be able to continue this discussion. I thank you, Senator Harkin. Thank you very much.

Ms. TURNER. Thank you very much.

Mr. STANLEY. Thank you.

Senator HARKIN. Thank you, Mr. Chairman. I will just stay where I am.

Senator MIKULSKI. Will the Senator from Iowa yield, because it follows the Senator from New Jersey's train of thought?

Senator HARKIN. Surely.

Senator MIKULSKI. First to the Senator from Iowa, the Senator from New Jersey asked my questions in the dialog that occurred. So I have no further questions. But we just want to amplify that this is a public investment that generates private sector jobs.

So when we talk about revenue generation, we are talking, Senator, not only about revenue at the farebox, we are talking about an expanded tax base, the opportunity for minority and minimum wage people to get to jobs that they could not get to before. They were essentially locked out of those jobs because of inadequate public transportation.

And that this investment, significant and generous as it has been from the federal government, has resulted in local communities being able to help themselves and also in ordinary people being able to help themselves. So thank you for the opportunity for me to comment.

Senator HARKIN. Thank you very much. Again, I just want to express to you again, Ms. Turner, my support for getting as much funding up front to not only get to the 89 miles but to move forward on the completion of the 103 miles as rapidly as possible.

I have been in this area since 1969, living in all three jurisdictions. I have lived in the District, I have lived in Maryland in two different places in Maryland, out by College Park and down in the Suitland area, and now I find myself living out south of Alexandria. And I am telling you, we are just about ready to reach a gridlock around this place in transportation.

You have an accident on the Wilson Bridge and you have an accident on Route 1 or the GW Parkway and you may as well go home, because you are not going to go anywhere.

Senator MIKULSKI. If you can get there, Senator.

Senator HARKIN. Yes; you cannot even turn around and go back home.

Senator HARKIN. And then on weekends, when the traffic is not flowing in and out, to try to get crosswise from one area to another, represents an almost impossible task. Then you can get into the city and back, but you can not get from one jurisdiction crosswise to the other one.

I have been involved once in Maryland and once in Virginia on a Saturday in a traffic jam that is every bit as bad as early morning rush hour, because there happened to have been an accident and everything was just blocked up and that was the end of it.

Plus, what has happened, now I just want to make some comments on this, the building of the Metro system and the completion of it generates just exactly what Senator Mikulski's talking about. Further development in the private sector, which puts further strain on those areas.

Now you know what is happening out in Tyson's Corner. Mobil is coming out there, thousands of more jobs. Down in the area where I live there is a new housing development going to go up. It is, I guess, supposed to be almost as big as Reston or something like that.

I have been out there since 1979 and the housing development out there has just been incredible. Yet there are still only two ways to get to Washington. The number of cars have just completely multiplied.

I make those comments just in the way of saying that we have got to complete this system and obviously the cheapest way is to do it the fastest. The more you prolong it, the more you stretch it out, the more it is going to cost. Better to get it done right away.

Second, again looking ahead, I do not know if you are making plans or if anyone in this area is making plans for what I might call connectors around, not just in and out but connectors around. It seems to me that that is the next logical step and if you look at other transit systems in large cities, they have the connectors around so that people can cross jurisdictions around.

I do not know. Are plans being made along that line? Is anyone looking down the future path toward that?

Mr. STANLEY. There is a group interested in an outer beltway, an automobile connector, Senator. But we have not seen any plans yet that would connect up the rail lines.

Senator HARKIN. Well I think that somebody better start looking at it. I know that there is talk about another bypass around Washington and we have to be looking at that to get that north-south traffic off that beltway.

You know what the Wilson Bridge is like. And that is not only a burden just on the Washington people but on anyone else traveling by. This morning there was a 5½-mile backup getting on Wilson Bridge.

Ms. TURNER. Senator Harkin?

Senator HARKIN. Yes.

Ms. TURNER. In the report that we gave you on the funding beyond 89.5 miles, there is a section that deals with future growth and future transportation addressing those needs.

Senator HARKIN. Oh, I will read that. I did not see that. Thank you. I just make those observations that somebody better be looking ahead on that and making adequate plans because this area is not going to shrink. It is going to grow even more because of what we have got now, it is going to grow more.

The last point I would make is that, Ms. Turner, maybe you can comment on this. I happen to use the Huntington station periodically. If I get there after 8:30 I may as well forget it. I cannot park. Now is that true at other stations too?

Ms. TURNER. One of the major priorities in the Transit Authority is the question of parking. We have been working on a fairly creative and imaginative program that will begin to address the parking concerns. There are concerns in every jurisdiction about parking, and we just have to come to terms with that problem.

Senator HARKIN. Will these other jurisdictions, the state of Virginia, the county of Fairfax, or Prince George's, I mean, what are the——

Ms. TURNER. It will be a cooperative effort. That is the history of this project, working together, the Authority and the local jurisdictions, and we would see that as a cooperative effort to solve the parking problem.

Senator HARKIN. Well, I would be anxious to know how this is progressing.

Ms. TURNER. Let me report back to you on some of our plans.

Senator HARKIN. Because I would like to be helpful in any way that I might be helpful in this whole parking thing, because it really is bad.

Well, I just make those general, the interconnections, plus and out of this part of the hearing but anything to relieve that traffic congestion on the beltway, and then that parking thing.

I would hope that someone, and I might even myself by thinking in terms of providing some funds for a study to be done on the future development of interconnecting links of the Metro system in a circumference around the District of Columbia.

Ms. TURNER. Well, I would like to discuss that further with you at your convenience.

Senator HARKIN. I am sorry?

Ms. TURNER. I would like to discuss that further with you at your convenience.

Senator HARKIN. Well, I would like to know, because I am prepared to move ahead with something like that to try to get someone to start studying this. Thank you.

Senator MIKULSKI. Thank you. Senator Harkin, just as a comment. First we would like to thank you for the leadership you are providing as the subcommittee chair on D.C. appropriations, because as you work as assiduously for the D.C. community, it makes you in some ways almost the finance director for the District of Columbia.

I do not mean to make you nervous about that. But as you pursue perhaps thinking about a study it might be helpful, and I would be very happy to arrange this, for there to be a meeting of the Metro people as well as the heads of the departments of transportation for Maryland and Virginia, to be sure that plans and studies are not duplicative and make wise use of the dollars.

I know that my own state is pursuing what we would call intercounty connectors, so that when we talk about our metropolitan area we really think of it as a system. If the chairman, upon reflection, would like me to organize such a meeting I would be happy to do so.

Senator HARKIN. I would like to because, does anyone disagree that this area is going to continue to grow and expand? It is going to. We all know that, and so the longer you wait the more expensive it is going to be in terms of property acquisition and everything else. It is best to start doing it now when at least you have some capability of doing that.

Senator MIKULSKI. Well, let us organize for you then a briefing of our respective heads of departments of transportation along with Ms. Turner, to do that. And maybe eventually it might even lead to a snow summit, which takes me if you would to two quick comments.

First, Ms. Turner, high marks to you for your hard work during our snows, or snowstorms. But the storms that occurred were most volatile after the snow had fallen. I know that you worked hard, but I was glad to see in your report that there was the assumption of responsibility for the lack of communication.

I think those in the metropolitan area did not know what was going on and we know the enormous problems that commuters faced, and the fact that they did not know that it was not worth the effort. I am glad to see you are strengthening your communications system.

I look forward to the test. I would suggest a few drills. The kind we would do for earthquakes and nuclear accidents, and would hope that you and Mayor Barry and his team, as well as others, are coordinating for snow.

Ms. TURNER. Yes; we are.

Senator MIKULSKI. The last comment I want to make, Mr. Stanley and Ms. Turner, I hope that the negotiations will go on. I know speaking for Congressman Hoyer and myself, we are very anxious to work with you to see that this is resolved and to help prod our respective states and subdivisions, perhaps to even look at some new alternatives.

So keep on talking. Keep on working. And thank you.

Ms. TURNER. We will.

SUBMITTED QUESTIONS

[The following questions were not asked at the hearing but were submitted for response for the record:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

PROJECT MANAGEMENT OVERSIGHT (UMTA)

SENATOR LAUTENBERG: Do you agree with Mrs. Turner's statement that the oversight team clearly works for you?

ANSWER: The Project Management Oversight Contractor, (PMOC) a joint venture of Day & Zimmermann/Stone & Webster, both highly professional firms with impeccable credentials, is under contract to the Urban Mass Transportation Administration, which I administer. In that respect, the statement is true. However, the implication contained in that statement, that the PMOC is compromising its professional objectivity to do my bidding, is incorrect and demeans the integrity of two outstanding firms.

SENATOR LAUTENBERG: Do you believe that an adversarial relationship exists between the oversight group and WMATA?

ANSWER: I do not. I understand that at the working level, between WMATA staff and the PMOC staff, there is complete cooperation and a mutual desire to "get the job done."

SENATOR LAUTENBERG: Do you believe that these types of problems exist with other oversight contractors and grant recipients?

ANSWER: My understanding is that the working relationship between UMTA grantees and the various PMOCs are excellent. WMATA is unique in the perception of an "adversarial relationship."

SENATOR LAUTENBERG: Why is there a problem on this particular project?

ANSWER: I can only surmise that the problem has developed because, for the first time in the history of this project, WMATA's funding requests are coming under scrutiny. We are finding out that WMATA has been requesting large amounts of money well in advance of need, and relying on outdated cost estimates in support of these requests. To my knowledge, the only problem that existed on this project, with respect to the PMOC's activities, was WMATA's delay in providing data to the PMOC. For example, the PMOC initially asked for project cost estimates from WMATA in August 1986. No data at all was provided, despite additional requests, until December 5, it was at this time that we were informed that the cost basis for the Full Funding Agreement, which was signed in July 1986, dated back to 1981 and were very preliminary in nature. This was despite the fact that WMATA possessed revised cost estimates that were based on final engineering and that some of this work was ready to be advertised and bid upon. At a quarterly project management review meeting in February, I asked that WMATA provide the latest cost estimates as a basis for funding the work. This information was not provided until April 7, 1987.

SENATOR LAUTENBERG: Do you believe the Project Management Oversight process has helped UMTA and helped WMATA in the way originally intended by the Appropriation's Committee?

ANSWER: Yes. We have learned that the Project Management Oversight process benefits both parties. It directly benefits UMTA because it provides the manpower and expertise to perform our mission without directly increasing staffing levels. It has benefitted WMATA by focusing upon outdated internal reports that needed updating, providing the catalyst in getting a Value Engineering program initiated that promises to save millions of dollars and, speeding up the implementation of modern project management techniques.

SENATOR LAUTENBERG: Has the project management oversight firm analyzed the revised figures that WMATA was to update? If so, what are the results of your analysis?

ANSWER: The analysis of the revised cost figures has been completed. There is agreement on the techniques used to develop the costs and the conclusion is that the cost estimates are reasonable.

COMPLETION OF THE 103-MILE SYSTEM (UMTA)

SENATOR LAUTENBERG: Mr. Stanley, if you were advising WMATA how would you suggest they proceed if the goal was completion of a 103-mile system?

ANSWER: As I have stated often, WMATA should develop in cooperation with its financing partners a long range financial plan which addresses not only completion of the 103-mile system but also the resources to maintain and reconstruct this system when necessary. Specifically, WMATA cannot forever look to the Federal government for assistance simply because the government so generously assisted in construction of the system.

In the short term, that is, to complete the planned system, WMATA should look to increased local resources, especially private sector participation, and willingly increase the level of local funding for construction. There have been many local beneficiaries of the presently completed rail system, and those beneficiaries should contribute, as the Federal taxpayer has, to completion of the system.

I also suggest that WMATA, in this time of Federal budget deficits, forego their pursuit of favored treatment by the Congress and compete, as all other major cities must, for the national Section 3 Federal funds which were recently authorized.

SENATOR LAUTENBERG: Is your suggestion (or the Auto-Pen's suggestion) for the Franconia-Springfield segment applicable to the other unbuilt segments that cannot be funded under the Stark-Harris authorization?

ANSWER: The basic justification for new, heavy rail rapid transit systems in major metropolitan areas is the intense level of ridership that will be generated and which is needed to meet revenue expectations and operating costs. Given the substantial Federal investment in these systems, it follows that we are interested in station-site developments which will contribute to transit ridership.

It also seems reasonable to expect that the benefits which accrue from these developments through the provision of rapid transit facilities could very well be utilized, in part, to finance the construction and operation of the transit system.

Thus, generally speaking, a financing plan which provides increased local participation, public or private, is certainly applicable to all of the unbuilt segments of the Metrorail system.

SENATOR LAUTENBERG: If the WMATA construction schedule is on time, segments funded under the Stark Harris authorization do not come into revenue service until the early 1990's. In your analysis, under this scenario, will WMATA be generating enough revenue to maintain service, fund a depreciation reserve for capital replacement and fund the debt requirement?

ANSWER: The Federal City Council (FCC) study of Washington Area transit finance predicted that, in constant 1986 dollars, the non-Federal share of operating assistance and debt service on WMATA bonds would go from $219 million to $236 million between 1986 and 1991, or about an 8 percent increase in real terms exclusive of inflation. Though the region has financed this level of cost increase in the past, the addition of system rehabilitation and replacement and continuing rail construction puts the issue in a different light. In FY 1986, the WMATA rehabilitation and replacement program, financed almost exclusively by UMTA Section 9 funds and local match, was about $42 million in total. The FCC study, which was basically confirmed in WMATA's FY 1988 budget proposal, forecast this class of WMATA-related capital costs to rise to over $113 million by 1993, again in 1986 dollars exclusive of inflation. This represents an increase of over $70 million per year, equal to almost one third of the entire existing operating deficit.

With respect to other possible sources of Federal funds, there is no precedent for letting WMATA or any other new rail system financed with Federal funds (e.g., Atlanta, Baltimore, Miami, and Buffalo) into the Section 3 Rail Modernization

Program because its original and continuing intent is to bring the rail systems constructed with primarily local funds (e.g., New Jersey, New York, Chicago) to acceptable, modern standards. Realizing this objective will fully consume this resource. The increase in WMATA rehabilitation and reconstruction costs would thus have to be financed by local and State governments, supplemented by Federal formula program funds. Absent any movement toward development of a realistic financial plan and new dedicated sources of funding as both the Congress and Administration have called for, it would appear that legitimate rehabilitation and replacement needs are in danger of going unfunded, thus beginning the spiral of deterioration we have seen in the older rail transit cities.

SENATOR LAUTENBERG: It is the Committee's understanding that the cost to complete the remaining 13.5 miles of the 103-mile system could be $2.8 billion with the Federal share (at an 80:20 split) $2.2 billion. ($200 million a mile) Has UMTA estimated the cost to complete this system?

ANSWER: For completion of the system, UMTA has relied upon cost estimate data developed by WMATA. Based on this data, the remaining cost to complete a 103-mile system after exhausting the Stark-Harris authorization is $2.6 billion. While we do not support any additional special authorizations for WMATA or any other local transit system, assuming an 80 percent Federal match, the Federal cost to complete could be $2.1 billion.

FULL FUNDING AGREEMENT (UMTA)

SENATOR LAUTENBERG: Mr. Stanley, please describe what you see are the benefits to the Federal government because of the Full Funding contract signed with WMATA in July, 1986?

ANSWER: Briefly, the Full Funding Agreement with WMATA provides two major benefits. First, and most importantly, the agreement limits Federal participation to the funds remaining under the Stark-Harris authorization and protects the government from the ever-escalating costs of Metrorail construction. The limit provides a constant incentive to WMATA to control costs and complete construction on time. Secondly, for the first time in the entire Metorail construction program, WMATA must concentrate available resources, Federal and local, on completing useable, operable extensions of the system. This precludes WMATA from constructing facilities which cannot be brought into revenue service within current resources and which, as in the case of the Forest Glen or Waterfront stations for example, have sat idle for years.

SENATOR LAUTENBERG: The Full Funding Agreement signed July 16, 1986 stated that WMATA could proceed only in operable segments, broken down into phases. What phase is WMATA on right now? Is it true that WMATA cannot proceed on Phase III, unless WMATA has in hand the total amount, $1.2 billion, outlined in the full funding contract? Under a $130 million Federal contribution when can WMATA expect to have enough funding to proceed with Phase III?

ANSWER: WMATA is currently funded to the completion of Phase I of the Full Funding Agreement (FFA). Funds are available to undertake the work of Phase II (the FY 1987 appropriation). WMATA is preparing a financial plan for Phase II, as required by the FFA as a condition for the release of these funds. To proceed with the work of Phase III, WMATA needs to demonstrate that $1.17 billion are available to complete the work described in the FFA. UMTA maintains that $130 million Federal contribution in FY 1988, with local matching funds, $107.6 million of reprogrammed prior year funds (a level volunteered by WMATA in the Phase II funding plan) and a pledge of local funds of $65.6 million will be sufficient to undertake Phase III.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

Question: What is the status of your discussions with UMTA on providing funds to permit better cold weather transit operations? What will it cost to fund this program?

Answer. The following is a chronology of correspondence/meetings with UMTA and the UMTA Project Management Oversight Consultant (PMOC):

March 14, 1987	WMATA requested a letter of No Prejudice from UMTA to insure that the Winterization Program would proceed.
March 14, 1987	WMATA requested a $6.75M UMTA Section 3 grant to fund the first year third rail heater related projects.
March 24, 1987	WMATA briefed the UMTA-PMOC on the total Winterization Program.
April 3, 1987	WMATA submitted written responses to UMTA-PMOC telephone questions of March 26 and 30, 1987.
April 13, 1987	WMATA staff met with UMTA-PMOC to discuss additional questions.

On May 7, 1987 UMTA granted no prejudice authority for $5.0 million (federal funding) stating "Our subsequent approval of Section 3 funds would be further expedited if you would submit, when avaiable, a revised project budget detailing those projects items which you intend to procure with a federal share of up to $5.0 million."

As of May 21, 1987, there has been no written correspondence on the Winterization Program from the UMTA-PMOC. The total estimated cost for the 3 year witnerization equipment program is $28,280,000.

Question. Metro is requesting $250 million for FY 1988. This is an increase of $49 million over current levels. If no additional funds are available, how would that impact Metro's plans for FY 1988?

Answer. That would delay Section 9 funded programs and cause an adverse impact on Metro's funding plan by forcing the Authority to continue to use "pledged funds," e.g., 2/3-1/3, advanced match, etc., in order to underpin the FY 88 shortfall and to allow construction to proceed on schedule. This violates the intent of the Full Funding concept which was based on the "pledged funds" being made available for their original purpose, e.g., payment for litigation, bus/rail reliability programs, etc., subsequent to receipt of FY 1988 Federal Appropriation.

DEBT RETIREMENT (WMATA)

Question. Mrs. Turner, what steps has WMATA taken or is planning to take to retire the approximately $1 billion of debt that starts coming due in the year 2012? Please elaborate.

Answer. The Authority has been making installment deposits into a sinking fund since July 1982 for the purpose of repaying our one-third share of the debt. As of January 1987 the balance in this fund was $14.7 million, the balance required by the Bond Repayment Participation Agreement between the Authority and U.S. D.O.T.

UPDATED TABLES (WMATA)

Question. Update the table contained on page 542 of the Senate hearing record 99-721, part 2 of the last year's hearing on the history of federal appropriation to WMATA.

Answer. The updated table follows.

Question. Update the descriptions and charts describing unobligated balances and the WMATA operating budget found on pages 546, 547, and 548 of last year's hearing record. Senate Hearing Record 99-721, part 2.

Answer. The updated tables follow.

Metrorail Construction Funds Carryover/Obligated/
Committed from 1986 and Prior

		Millions
Modifications/Claims/Closeouts		$89.2
Real Estate		52.0
Projects Awaiting Obligation --		175.0
Construction (Structural/Finish/Systemwide) All Routes	160	
Utilities - All Routes	9	
Miscellaneous	6	
	$175	
Insurance		$ 9.6
Contingency		35.0
Total		$360.8

To date $6.4 billion has been provided for the construction of the Metrorail System of which $470.3 million is for current activities. The remaining unencumbered $360.8 million is a reasonable amount in a program of this magnitude.

It should be emphasized that, as a result of the Full Funding Agreement, UMTA requires that funds can only be spent on fully funded operable segments. This means that structural, architectural finish, and stage contracts (trackwork, automatic train control, etc.) must be completed consecutively rather than concurrently. Thus, funding is required to be appropriated now for contracts which will be obligated in later years.

COMPARISON OF FY 1988 BUDGET
TO PRIOR YEAR BUDGETS

	FY 1985	FY 1986 (in millions)	FY 1987	FY 1988
Cost	$392.1	$422.1	$448.9	$472.5
Revenue	206.0	241.1	238.7	249.3
Assistance	$186.1	$198.0	$210.2	$223.2

HISTORY OF FEDERAL APPROPRIATIONS FOR ALL WMATA PROGRAMS
(in millions of dollars)

	Rail Construction Program						Bus and Rail Capital Improvements Program					
	PL91-143 (2/3-1/3)	PL93-87 Handicapped	PL-Add-Ons	(Title 23) Interstate Highway Funds	PL96-184 Stark/Harris	Sub-Total	Section 3	Section 5 (Capital)	Section 9a/9 (Capital)	Subtotal	Operating 4/ Assistance	Debt Service
Prior to FY 1969	13.0					13.0						
Fiscal Year 1969	43.8					43.8						
1979	126.1					126.1						
1971	180.0					180.0						
1972	188.0					188.0						
1973	174.3					174.3	70.3			70.3		
1974	131.2	13.7	7.4 2/			152.3	9.0			9.0		12.7
1975	90.4	19.3				109.7	--			--	6.9	17.1
1976	68.0	9.5		475.0		552.5	15.8			15.8	11.5	22.2
1977	116.8 1/	6.8		400.0		523.6	17.4			17.4	17.8	19.4
1978	15.4	2.7		124.8 3/		142.9	21.6			21.6	17.8	60.9
1979				276.3		276.3	--			--	23.7	61.3
1980				275.0		275.0	7.5	13.8		21.3	25.7	65.8
1981				275.0		275.0	5.4	8.0		13.4	26.0	65.9
1982				284.7		284.7	8.0	11.4 5/		19.4	23.1	51.6
1983				45.0	240.0	285.0	11.9	7.3	17.9	37.1	18.5	51.7
1984					250.0	250.0			34.2	34.2	18.5	51.7
1985					250.0	250.0 6/			39.3	39.3 6/	18.5	46.2
1986					217.2 7/	217.2			26.6	26.6	18.5	51.7
1987					201.1 8/	201.1	5.0 9/		29.8 8/	34.8 8/	17.8 8/	51.7
Total	1,147.0	52.0	7.4	2,155.8	1,158.3	4,520.5	171.9	40.5	147.8	360.2	244.3	629.9

1/ Includes appropriation for the transition quarter of $26.7 million.
2/ Special Federal appropriation to fund construction of the Arlington Cemetery Station and the Mall entrance to the Smithsonian Station.
3/ $275 million was appropriated but $150.2 million was lost due to delays in completing Alternatives Analysis.
4/ Operating assistance for fiscal years 1975 through 1983 was from Section 5 funding. In FY 1984 and thereafter the funding was from Section 9 funds.
5/ $4.3 million of this amount was from Title 23 funding.
6/ Actual FY 1985 Stark-Harris funds received thru 5/15/86, $75.0 million. Actual FY 1985 Section 9 capital funds received thru 5/15/86, $38.5 million.
7/ Remainder of FY 1985 and 1986 Stark-Harris funds, $391.2 million released on 7/16/86 when Full Funding Agreement was executed. PMOC $1.1 million not available for construction.
8/ As of 5/21/87 $12.0 million in FY 87 Stark-Harris funds and 17.8 million in FY 87 Section 9 operating assistance funds have been received. No other FY 87 Federal funds have been approved.
9/ WMATA has requested a $6.8 million Section 3 grant for FY 1987 Phase I of Winterization Program. However UMTA has advised that no more than $5.0 million will be provided.

Projected Operating Subsidies

FY 1989	$228 million
FY 1990	$246 million
FY 1991	$258 million

Cost Recovery Ratios for Bus and Rail Operations

	FY 1984 Actual	FY 1985 Actual	FY 1986 Actual	FY 1987 Amended Budget	FY 1988 Budget
Metrobus	40.6%	41.2%	38.9%	37.4%	36.8%
Metrorail	61.6%	68.5%	71.1%	71.7%	71.1%
Composite	48.7%	52.6%	53.2%	53.3%	53.3%

Comparison of WMATA Cost Recovery Ratio
to Other Properties

CITY	AUTHORITY	FY 1986 COST/RECOVERY RATIO
Boston	MBTA	30.0%
Atlanta	MARTA	37.0%
Chicago	CTA	52.0%
Philadelphia	SEPTA	58.0%

ALREADY APPROPRIATED FUNDS (WMATA)

Question. In the prepared statement, Mrs. Turner, you state that of the $392.0 million in FY 85 and FY 86 funds $336 are encumbered. Since there isn't a budget term for encumbered could you provide for the committee the amount of funds actually obligated, and for what projects these funds are obligated?

Answer. The following was obligated as of December 31, 1986.

B Route (Wheaton)	Obligated
1B0103 Wheaton Tail Track	$20.9
1B3091 Forest Glen Station Finish	11.9
Outer E Route (PG Plaza)	
1E0071 Prince George's Plaza Station	39.6
1E0062 West Hyattsville Station	12.7
Inner E Route (U St. Station)	
1E0021 U St. Station & Line	20.4
1E0012 Mt. Vernon - UDC Station	33.8
F Route	
1F0032 Navy Yard Station	38.8
1F0033 Navy Yard Station East Tunnel	20.9
J Route (Franconia/Springfield)	
1J0021 Van Dorn Station & Line	36.5
Other	
Rail Cars	55.0
Ancillary Construction	1.6
Start-Up	5.0

Central Supply Facility	2.0
Project Management	62.0
Tools & Equipment	1.0
Trackwork (Inner E, B & J Route)	11.5
Total Obligated	$373.6
Federal Share Obligated	$298.9

Question. For the record provide a listing of the remaining funds that are committed, earmarked and/or encumbered but not obligated and the projects to which the funds are committed.

Answer. The following funds were committed as of December 31, 1986.

1B3010	Wheaton Station Finish	$8.5
	Landsdowne Substation	0.5
1F3021	Waterfront Station Finish	6.0
	Automatic Train Control for B&J Routes	17.0
	Trackwork for Inner E, B, & J Routes	14.8
Total Committed		$46.8
Federal Share Committed		$37.4

Question. For the record provide a similar break-out for the FY 87 funds. By project list the expected use of the $251.3m ($201m Federal + 50.3m Local).

Answer. The 1987 federal appropriation totalled $201 million of which $1 million was set aside for UMTA to use for its project management oversight (PMO) responsibilities. Therefore, $200 million in federal funds which must be matched with $50 million in local funds was appropriated for construction. A project list for the $250 million follows.

J Route (Huntington/Springfield)		
Electric Power	$5.0	
Substation Equipment	4.5	
Communications	3.0	
Automatic Fare Collection	1.3	
Inner E Route		
Escalators	6.0	
Outer E (Greenbelt)		
Trackwork-Procure & Install	11.2	(To P.G.)
Trackwork-Procure & Install	7.4	(To College Pk.)
E-8 Tunnels Outbound of PG Plaza Station	62.3	
E-9 College Park Station & Line	29.2	
Real Estate Outer E	15.0	
F Route (Anacostia)		
Substation Equipment (Procure, Install)	5.1	
Fare Collection	5.9	
Trackwork	8.6	
B Route (Wheaton)		
Amherst Garage	5.5	
Fare Collection	3.2	
Start-Up	2.0	
Work Equipment	3.0	

Other	
New Requirements-Rail Cars	21.6
Project Management	35.0
Miscellaneous	15.2
Total	$250.0

RAIL DE-ICING AND RELATED PROJECTS (WMATA)

Question. If WMATA received a letter of No Prejudice for purchase of de-icing equipment and proceeded to use its own funds, where would you get these funds?

Answer. There are several sources of funds that could be used temporarily to fund the de-icing projects under letter of No Prejudice authority until grant funds were received. Once a letter of No Prejudice is received from UMTA, WMATA staff will propose funding sources to the WMATA Board of Directors. The Board of Directors will make the policy decision on which source(s) of funds will be used.

FISCAL YEAR 1988 FUNDING REQUEST (WMATA)

Question. What would be the effect of a "freeze" of $200 million on WMATA's program?

Answer. That would delay Section 9 funded programs and cause an adverse impact on Metro's funding plan by forcing the Authority to continue to use "pledged funds," e.g., 2/3-1/3, advanced match, etc., in order to underpin the FY 88 shortfall and to allow construction to proceed on schedule. This violates the intent of the Full Funding concept which was based on the "pledged funds" being made available for their original purpose, e.g., payment for litigation, bus/rail reliability programs, etc., subsequent to receipt of FY 1988 Federal Appropriation.

Question. Mrs. Turner, in a year when transportation activities in the Senate Budget Resolution are cut approximately 5 percent below the 1987 levels, what is the compelling argument for funding WMATA twenty-five percent above the fiscal year 1987 levels?

Answer. One of the main reasons for developing the Full Funding Agreement was to establish a construction program based on a stable funding level to the extent permissible by the Federal appropriation process. The actual Federal appropriations for the period 1983 through 1985 averaged $250 million from the Stark-Harris authorization. This amount was used as the basis for the Federal funding levels which were the basis for the Full Funding Agreement. A Federal Appropriation of $250 million will permit the Metrorail construction program to continue on an uninterrupted schedule and in accordance with the Full Funding Agreement. It will also save the Federal and local governments escalation costs which would be incurred by stretching out the construction period.

PROJECT MANAGEMENT OVERSIGHT (WMATA)

Question. Mrs. Turner you have stated that the Project Management Oversight Manager "...clearly works for Mr. Stanley" and you suggest that a neutral body be found to oversee Metro construction costs. Why did you make this statement?

Answer. As you know, the Project Management Oversight Contractor (PMOC) was hired by UMTA even though the funding was provided from WMATA's Rail Construction Program. UMTA then used the PMOC to develop data to support its request for $130 million. A contractor works for its employer, in this case, UMTA.

I strongly feel that a neutral consultant, one that reports to a neutral party, would be more objective in overseeing our construction program. This neutral firm would better understand the problems of both agencies.

Question. How do you suggest a neutral body be found to resolve your cost estimating differences with UMTA?

Answer. A neutral body with the appropriate skills necessary for evaluating the costs of heavy construction could be hired, for example, by GAO. This firm could review our estimates and estimating procedures. They could also interview UMTA staff to understand their concerns and then make an objective resolution of any differences. We note, however, that this may not be necessary, since at the May 6th, 1987, quarterly review, UMTA and the PMOC stated that they had no significant disagreement with our estimates.

Question. Since the House Hearing, has WMATA provided the Oversight Contractor with the requested updated construction cost estimates?

Answer. Yes, we have provided the PMOC with all the information requested; our revised construction cost estimates for Phase I, II, and III of our Master Program. We have also held several follow-up meetings to resolve differences. We have provided explanations and back-up documents to substantiate our estimates. The Oversight Contractor has concluded that our cost estimates are reasonable.

Question. What has been the result of the analysis of the new figures?

Answer. The following table highlights the results: ($ in Millions)

Master Program	FFA Budget	Revised Estimate	Difference
Phase I	796.8	808.1	11.3
Phase II	203.0	196.6	(6.4)
Phase III	211.5	208.7	(2.8)
TOTAL	1,211.3	1,213.4	(2.1)

Question. Mrs. Turner, has the Project Management Oversight conducted by outside consultants been at all beneficial to you and your management team?

Answer. I am reluctant to flatly respond to this question, but if I have to do an overall evaluation, I would say that their involvement in our project has consumed valuable management and staff time mainly for the time required to educate the PMOC staff on how our system operates. This has also resulted in counterproductive work efforts by the WMATA staff. However, the cost status report which was jointly agreed to by PMOC and WMATA has been beneficial to us in terms of reporting progress by operable segment for the Full Funding Master Programs.

Question. Has the PMO process identified any cost savings for the system or identified any better ways on how to proceed with the construction of the 89.5 miles?

Answer. No, the PMOC has not recommended cost savings or better ways to proceed with the construction of 89.5 miles of the system. However, they have been very active in criticizing our cost estimates and change order tracking procedures among other things.

Question. Would WMATA employ an outside Project Management Oversight firm if it weren't paid for by Federal funds?

Answer. WMATA never contracted with an outside PMO firm in the past or foresees a need to do so in the future because we have a group of outstanding professionals with extensive backgrounds in mass transit systems. Our construction management system is one of the best in the world. We have been honored with several awards for safety and design and construction of our system. I strongly believe that we are fully staffed to offer a quality transit system in the Nation's Capital in a most cost effective way. In fact, WMATA frequently hosts representatives from other transit systems and construction projects who review our procedures to use as a model for developing and strengthening their project management process. I think that the money set aside for the PMOC could be better spent in additional construction.

FISCAL YEAR 1987 APPROPRIATIONS (WMATA)

Question. For this fiscal year, WMATA was provided $201 million for construction purposes. Has this money been obligated?

Answer. Of the $201 million appropriated, $1 million was set aside for UMTA to use for its project management oversight responsibilities. UMTA has only released $12.0 million (federal funds) for the Outer E Route real estate acquisition.

Question. If not when does WMATA expect to obligate these funds?

Answer. Metrorail Construction Program Obligation Schedule for the FY 87 Appropriation Dollars in Millions by Calendar Year

CY 87	CY 88	CY	CY	Total
28.3	196.3	19.2	6.2	250.0

Federal:	$200.0m
Local Match:	50.0m
	$250.0m

Question. Does WMATA still have unobligated FY 85/86 funds? (If so why?)

Answer. Approximately $150 million in unobligated, however, these funds will be encumbered in FY 87. The funds are earmarked for two large structure projects on the Outer E Route and for systemwide work which must follow the advertising and award of structural and finish contracts. Under the Full Funding Agreement, WMATA receives funding in a given year for an operable segment. This means that structural, finish and stage work, though funded, cannot be placed under contract until structural contracts are well underway.

FULL FUNDING AGREEMENT (WMATA)

Question. Mrs. Turner, what benefits do you see for WMATA for having signed the Full Funding Contract?

Answer. Under the Full Funding Agreement we have established a mechanism which, if it were operating properly, would expedite the flow of funds to WMATA after Congressional appropriation. The agreement clearly defines the project, the funding mechanism, and the responsibilities of all parties. This should assist in establishing harmonious and cooperative working relationships between UMTA and WMATA. By recognizing that the full Stark-Harris authorization, with a current balance of $542 million, is available to complete 89.5 miles of the Metrorail system, it should encourage all parties to make those funds available as quickly as possible so as to minimize the inflationary effects of delay.

Question. Why doesn't the Full Funding Agreement signed with UMTA have an extraordinary cost provision?

Answer. As contrasted with other transit agencies, WMATA has a separate authorization and specific appropriations for the construction of its rail transit system. As such, UMTA is not in a position to give or withhold discretionary grants to cover any extraordinary costs. A Congressional appropriation is required. WMATA and the local jurisdictions have accepted the risk that if such extraordinary costs occur and Congress chooses not to appropriate funds to cover them, the costs must be borne locally. Clearly, this decision was made in the belief that legitimate and justifiable costs would be covered.

OPERATING SUBSIDIES (WMATA)

Question. What does WMATA receive from the federal government in the form of operating subsidy?

Answer. In FY 1987, WMATA received $17,819,744 in federal operating assistance.

Question. Roughly, what percent of the subsidy goes to offset the bus operations and how much of the rail operations?

Answer. We do not assign the federal operating assistance to modes. It represents 4% of our FY 1987 operating cost.

Question. Does the need for operating subsidy increase or decrease as more miles are added to the existing heavy rail system?

Answer. Over the past five years, increases in operating subsidy have been minor with the opening of new rail segments due to the favorable cost recovery ratio of the rail system which is currently more than 71%.

SUBCOMMITTEE RECESS

Senator HARKIN. Well, thank you very much, Senator Mikulski. Thank you for being here today. The Senate Appropriations Subcommittee will stand adjourned until May 7, on Thursday morning, when we will have the Federal Aviation Administration and the GAO.

Ms. TURNER. Thank you.

Mr. STANLEY. Thank you.

[Whereupon, at 12:20 p.m., Thursday, April 30, the subcommittee was recessed, to reconvene at 10 a.m., Thursday, May 7.]

DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1988

THURSDAY, MAY 7, 1987

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10:17 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Frank R. Lautenberg (chairman), presiding.

Present: Senators Lautenberg and D'Amato.

GENERAL ACCOUNTING OFFICE

STATEMENT OF HERBERT R. McLURE, ASSOCIATE DIRECTOR, RESOURCES, COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION

ACCOMPANIED BY:

THOMAS BARCHI, GROUP DIRECTOR, RESOURCES, COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION

JOEL SLOTSKY, GAO EVALUATOR, RESOURCES, COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION

OPENING REMARKS

Senator LAUTENBERG. The Subcommittee on Transportation of the Appropriations Committee will come to order. I apologize for starting a little bit late. It is a chronic problem for all of us with other subcommittee meetings taking place at the same time. We will try to move the hearing along.

This hearing is the first of two that we have scheduled on the fiscal 1988 budget for the FAA. The total budget authority request is $4,786,401,000.

This is an increase of $980,320,944, or roughly 26 percent over the enacted fiscal year 1987 level. In addition, an obligation limit of $1,017,000,000 is proposed for the Airport Grants Program.

The budget resolution before the Senate assumes in round numbers a $400,000,000 reduction for programs and agencies within the jurisdiction of this subcommittee. It also assumes a freeze for FAA. How we will deal with this funding constraint in the face of the obvious need to upgrade the physical and human resources of our airspace system is a very nice question.

Today the primary focus will be the request for FAA operations and the safety and reliability of our air traffic control system. The operations request totals $3,248,228,000, which is an increase of $465,288,000 over the enacted fiscal year 1987 appropriation. Tomorrow we are going to be examining FAA's capital accounts—facilities and equipment; research, engineering and development; and airport grants.

Needless to say, FAA's operational requirements are heavily dependent on the success of its capital programs. But these are long-term solutions. In the meantime, we clearly have some very serious problems in our national airspace system. The signs of growing stress and strain are more evident every day.

The number of near midair collisions continues to increase. In 1985, there were 758. Last year there were 839. And in the first quarter of this year, the slowest period of air travel, there have already been 198.

Operational errors are up sharply by 18 percent over the first quarter of last year.

Runway incursions are climbing. In 1984, there were 77. In 1985, there were 104, and the preliminary count for 1986 is 115.

Delays are all too prevalent, so much so that a new term has entered the American vernacular. It is called "tarmaced." At the same time, the volume of aviation traffic is continuing to expand. Just last March a new all time record of 113,998 for air operations in a single day was set.

The situation has become so serious, in fact, that the Chairman of the National Transportation Safety Board believes the limitations on air traffic are necessary to protect the public safety.

Meanwhile, the administration sticks to its one-step-at-a-time approach to rebuilding the air traffic control work force and developing the capacity to handle the impact of deregulation. The result, predictably, is progress at a glacial pace. I believe, and I think other members of this committee believe, that it is time to stop playing catchup. We need to get ahead of the problem for a change.

But those of us in the Congress cannot do it by ourselves. We can push. We can prod. We can cajole. We can try to provide the necessary resources. But we cannot provide the aggressive and innovative executive leadership that it is going to take to get ahead in this game. And before that happens, the people calling the shots in this administration are going to have to recognize that we are behind.

The subcommittee sill be reviewing this and related issues this morning. We will be hearing first from Mr. Herbert McLure and other aviation experts from the General Accounting Office. After the GAO presentation, Admiral Engen and his associates will have the opportunity to defend their budget and their program.

I would note that tomorrow is going to be the last appearance Admiral Engen will make before this subcommittee. He has announced his retirement from FAA, and I understand he expects to leave this July. We have had differences, but we have the utmost respect for Admiral Engen, the job that he has taken upon himself, and the successes for which he deserves credit. We will continue to argue about some of the areas in which we do not agree that we have seen success.

With that, I would invite my distinguished college, Senator D'Amato, for his statement.

STATEMENT OF SENATOR D'AMATO

Senator D'Amato. Thank you, Mr. Chairman. Since the airline deregulation began in 1978, we have had an enormous increase in aviation traffic. Low fares have made air travel more affordable and have encouraged ordinary travelers, not just business travelers, to become frequent fliers.

However, along with the low fares has come a growing awareness that safety must not be treated as an expense that can be trimmed to meet air carrier profit and efficiencies. FAA's dual role as a promoter of aviation, and as a regulator and enforcer of aviation standards must be carefully separated to safeguard the public.

For fiscal year 1988, the administration has proposed total budget authority of $4.786 billion for the FAA. This includes $3.248 billion for operating, $38 million for headquarters administration, $1.35 billion for facilities and equipment, and $150 million for research and development. In addition, an obligation ceiling of $1.017 billion is proposed in airport grants. General fund revenues represent $870 million of the request, and the trust fund revenues account for the remainder.

It is a mystery to me how we are going to be able to fund these requests given some of the actions of the Senate yesterday, last evening. I am interested in hearing how the Administrator, Admiral Engen, concerning the FAA, will cope with the budget that has been adopted for transportation programs given the crush as it relates to the dollars in transportation, the Coast Guard, the FAA. It would seem to me that we are going to have to be very careful in prioritizing and seeing to it that the safety concerns come first.

It would also seem to me that if one looks at the numbers that are compiled by GAO and others, that the safety record is not one which we can be proud of. I am concerned about those numbers of near midair collisions . In the first 4 months of 1987, there have been 198. Now this compares to a total of 785 during the entire year of 1985, which increased to 839 during 1986.

If anything, we see an upward movement of more and more near-misses, midair collisions. I would suggest that anyone who says all is well is a stranger to the truth. Anyone who suggests that we should tolerate the present situation is not realistic. The public is not aware of it, and there can be tragic consequences both to the airlines, not to mention the loss of human life, if these events continue. There is no doubt that we are going to have more in the way of not just near-misses, but substantial accidents.

I think the time has come about where we examine the regulation of air traffic and the numbers of planes during peak hours that should be permitted in and out of our densely crowded airports. This business of say, well, we have deregulated, let them all compete, let them all fly off, it absolutely does not stand scrutiny when one looks to see the number of accidents and near-misses that have been taking place with regularity. I think it is absolutely essential and I do not believe, by the way, that we are abusing the free enterprise system by saying we want a safe system.

The American public really believes that there are these adequate controls at our airports, and they are not. I would hope that we would be able to explore, Mr. Chairman, this situation. I know it has been a source of concern of yours over the years with some specificity with our people from the General Accounting Office. I am looking forward to this hearing.

[The statement follows:]

STATEMENT OF SENATOR ALFONSE D'AMATO

Mr. Chairman, today and tomorrow we will examine the fiscal year 1988 budget request for the FAA. This morning the subcommittee will review operational and safety aspects of the FAA's proposal. Tomorrow, we will focus on the FAA's capital program. In addition to hearing from FAA Administrator Engen, we also will hear from witnesses from the Government Accounting Office [GAO].

My primary concern with the FAA has been and will remain its duty to provide the traveling public with the safest possible airspace system. Since airline deregulation began in 1978, we have had enormous increases in aviation traffic. Low fares have made air travel more affordable and have encouraged ordinary travelers, not just business travelers, to become frequent flyers. However, along with the low fares has come a growing awareness that safety must not be treated as an expense that can be trimmed to meet air carrier profit and efficiency goals. FAA's dual role as a promoter of aviation, and as a regulator and enforcer of aviation standards must be carefully separated to safeguard the public.

For fiscal year 1988, the administration has proposed total budget authority of $4.786 billion for the FAA. This includes $3.248 billion for operations, $38 million for headquarters administration, $1.35 billion for facilities and equipment, and $150 million for research and development. In addition, an obligation ceiling of $1.017 billion is proposed for airport grants. General fund revenues represent $870,6 million of the request, and Trust Fund revenues account for the remainder of $4.933 billion.

The fiscal year 1988 request is a 20-percent increase—about $1 billion—above the fiscal year 1987 enacted level. It is a mystery to me as to how we will be able to fund this request, given the actions taken by the Senate Budget Committee to freeze domestic discretionary programs. Last week, however, the Appropriations Committee managed to report out a fiscal year 1987 supplemental bill providing $55 million for 225 new air traffic controllers by the end of fiscal year 1987. I am interested in hearing from Administrator Engen concerning how the FAA will cope with the Senate Budget Committee assumptions for transportation programs.

FAA OPERATIONS

FAA operations represent 56 percent ($3.248 billion) of the agency's fiscal year 1988 budget request. This is an increase of $371 million. Staffing requirements for operation of the air traffic control system constitute the lion's share of this account, $1.452 billion.

Aviation safety and growing delays must be addressed again this year. Over the last several years, Congress has provided additional funds for controllers and inspectors. However, controller levels and proposed hardware enhancements still may not be enough to handle the growing demand for airspace.

It is clear that our national airspace system is not as safe as it should be. I am concerned about the number of near midair collisions: In the first 4 months of 1987 there have been 198. This compares to a total of 758 in 1985, which increased to 839 in 1986. Air traffic has reached record levels while operating errors are up 18 percent over the first quarter of last year. There is still much work to be done to assure the safety of the traveling public.

Mr. Chairman, I look forward to discussing these important matters regarding FAA operations with today's witnesses.

Thank you, Mr. Chairman.

STATEMENT OF MR. MCLURE

Senator LAUTENBERG. I thank you, Senator D'Amato. I now invite you, Mr. McLure, to make your statement. If you can contain it to 10 minutes, we would appreciate it. If you run a few minutes over, we are not going to cut you off. We are very interested in what you have to say.

We appreciate the fact that your agency has been so responsive to our request. Unfortunately, we do find ourselves in a contest trying to determine what is the case. And we appreciate the fact that you come in as an agency as objectivity as your mission and provide us with the degree of knowledge that you do. We look forward to hearing from you and the chance to ask you some questions later on. Do you want to introduce your colleagues?

Mr. MCLURE. Thank you, Mr. Chairman. I am actually very pleased to be here. We appeared as witnesses at several of the same hearings last year, and I was impressed with your interest at the time.

With me at the table are Tom Barchi, who is the person that manages most of our work connected with the FAA work forces; and Joel Slotsky, who has done our work on airline inspections.

I will summarize my statement. I urge those who are able to get copies of it to read the parts that I do not talk about this morning because they also are important.

FAA'S RESPONSE TO INCREASING AIR TRAFFIC

Our work over the past few years has shown that FAA needs more people in each of its major work forces, and what we are going to say this morning probably is unusual for us because we are saying they need more money. We, therefore, support FAA's request to increase the controller work force by 225 positions, and the inspector work force by 178 positions in fiscal year 1988. We are concerned, however, that FAA's fiscal year 1988 budget request does not reflect realistic maintenance staffing needs.

Deregulation of the domestic airlines in 1978 affected FAA's responsibilities in two main ways. First, air traffic grew to record levels and is expected to continued to grow. Increasingly competitive scheduling and hub and spoke operations have created peak air traffic periods placing extra demands on the air traffic control system.

Even before deregulation FAA knew that air traffic would continue to rise through the turn of the century, placing unprecedented demands on the air traffic control system. FAA also knew that meeting these demands safely and efficiently would require improved and expanded services, additional facilities and equipment, improved work force productivity, and the orderly replacement of aging equipment.

In December 1981, FAA published a comprehensive NAS plan to modernize, automate and consolidate the existing system. One NAS plan goal is to increase the productivity of various FAA work forces. Air traffic controller productivity is to be increased by the advanced automation system. Five years into the plan, however, the system has experienced schedule delays totaling about 8 years, which means that there are going to be corresponding delays in the productivity gains.

AIR TRAFFIC CONTROL WORK FORCE

Meanwhile, FAA has not rebuilt the air traffic control work force to its current staffing standards and goals. The net result of FAA's actions to date is that FAA has fewer air traffic controllers now than it did in 1981 to handle more traffic with the same air traffic control system. FAA maintains that the system is presently operating safely, and that there were more air traffic controllers than were needed before 1981.

We reported in March 1986, that during 1985 we had surveyed the controller work force, including supervisors and managers, and found that they thought that they were being stretched too thin. They believed the situation could impair their ability to maintain the proper margin of safety. Also, our consultant, the Flight Safety Foundation, concluded that the air traffic control system was not as safe at the time of our survey as it was before the 1981 strike.

CONTROLLER WORKLOAD

We concluded that FAA could not quickly increase the number of air traffic controllers, or provide new equipment to reduce their workload, leaving it only two choices. One was to continue to stretch the controllers. The other was to limit traffic. We recommended limiting traffic, but did not specify where or how. We did not have in mind a general limitation on the total quantity of air traffic, but rather limits on the quantities of air traffic in FAA's busiest control sectors at their busiest times. In other words, we believe that FAA should do more to tailor air traffic to the capabilities of its air traffic controllers.

In its response to our report and in hearings, FAA has stated that its existing traffic management system prevents controllers from having to control more traffic than they can safely handle, and that the safety level of the air traffic control system is not being adversely affected.

FAA also stated that while controllers may perceive that they are overworked, the traffic management system includes a number of safeguards to preclude overload from happening. In addition to its central flow control program, FAA identified the following safeguards. First, recent improvements to the traffic management system to predict overload and alert flow control.

Second, local traffic management units at each of the 20 air route traffic control centers in the continental United States, and at designated airport towers.

Third, firstline supervisors responsible for monitoring individual sectors and adjusting traffic flows.

Fourth, the controllers themselves who are responsible for making individual judgments on how much traffic they can safely handle.

FAA believes that these safeguards, if properly implemented, should accomplish the tailoring of air traffic that we believe is needed. However, we recently looked into how well these safeguards were working in the Chicago area to respond to inquiries from the Subcommittee on Government Activities and Transportation of the House Committee on Government Operations. We reported at their February 27 hearing that none of the safeguards were fully implemented in Chicago and were not a reliable means for insuring the controllers were not faced with more traffic than they could safely handle.

GAO STUDY OF 43 MAJOR FACILITIES

At your request, we gathered FAA data similar to the data that we gathered at Chicago for other FAA centers and major terminals which had experienced air traffic activity to determine whether similar conditions existed elsewhere in the system.

As is generally perceived, we found traffic substantially higher than prestrike levels, and experienced staffing levels lower than FAA goals. We also found FAA authorized traffic management unit staffing substantially below the levels called for by FAA's staffing standard in all 16 en route centers we checked, and actual full-time staffing below the FAA-authorized level in 11 of them. We found full-time staffing levels below FAA-authorized levels for traffic management units in 10 of the 12 towers that had them.

Finally, we found that firstline supervisors controlled traffic at least half their total time in two centers and one tower.

From these data we would conclude that the situation we found in Chicago is not unique and that there are other centers and towers in the air traffic control system where traffic tailoring based on controller workloads in peak periods may be needed to maintain safety.

FAA, with congressional encouragement, is working to increase its controller work force to 15,225 by the end of fiscal year 1988. This includes an increase of 225 in fiscal year 1988, and we believe the increase is needed. We cannot at this time, however, say how many air traffic controllers is going to be enough.

FAA'S INSPECTOR WORK FORCE

Deregulation's second major effect on FAA came about because of the flood of new airlines and accompanying competitive airfares that occurred in commercial aviation after deregulation, creating an environment that pressured airlines to contain expenditures for aircraft maintenance, flight crew salaries, and other controllable expenses; a situation we think required greater FAA surveillance over airline operations and maintenance.

While the 1978 act removed government control over fare costs and schedules, FAA remained responsible for assuring that airlines comply with federal safety regulations. Until 1984, however, FAA took few steps to address the impact deregulation had on its safety inspection workload or staffing requirements.

For example, between 1978 and 1983 when the number of airlines and aircraft grew substantially, FAA's inspector work force was reduced from about 1,600 to about 1,500, or by about 7 percent.

In May 1986, we testified that FAA could not say with assurance that airlines were complying with federal safety regulations. FAA studies, as well as those conducted by the Office of Inspector General, and by us, showed that FAA's airline inspection and followup activities were often insufficient to identify major safety problems, or to insure that problems were corrected once they were detected.

FAA also concluded that it needed to improve its surveillance of airlines, and building on initiatives launched by the Secretary of Transportation, has begun to take action on a broad front. FAA had increased the size of its inspector work force to about 1,919 as of the end of fiscal year 1986. FAA expected to increase the number of its inspector positions by the end of 1987 to 1,975, and has requested an additional 178 inspector positions in fiscal year 1988.

While FAA's requested increase in inspector positions is apparently warranted, FAA cannot at present know how many inspectors they actually need or where they should be assigned. FAA does not now have agencywide inspection standards that permit an accurate analysis of staffing needs. Current inspection guidelines specify only minimum inspection requirements applicable to all airlines.

Our report which discusses these issues and FAA's responses will be out within the next several weeks. We will recommend improvements in FAA's staffing standards to address this problem.

FACILITIES MAINTENANCE WORK FORCE

A third area. Competing budget priority and FAA's commitment to reduce airway facilities maintenance staff as part of the productivity gains to be derived from the NAS plan have caused a shortfall in the funding available for FAA maintenance staffing.

Until recently, FAA has not filled maintenance vacancies because of hiring freezes and personnel restrictions, and during fiscal year 1987 FAA plans to maintain staffing at a level 16 percent below the field's workload as projected by FAA's maintenance staffing standard.

Last year Congress restored the number of full-time equivalent maintenance employees FAA proposed to cut. We believe that FAA's fiscal year 1988 budget request, once again, does not realistically reflect maintenance staffing needs. FAA should hire in advance of attrition for the maintenance work force to allow time for training.

By 1990, about 2,500 of FAA's 8,300 engineers and technicians will be eligible to retire. That is about a quarter, more than a quarter. By 1995, almost 60 percent of the maintenance work force will be retirement eligible. Because training takes from 2 to 5 years, FAA needs to begin hiring people now to establish a pipeline for when those technicians leave.

So far FAA has been hiring only to fill vacancies when they occur. This approach replaces qualified, experienced technicians who can carry full workloads with inexperienced technicians who will need extensive training and results in inefficiencies and skill shortages, reduces total maintenance, increases equipment outages, and demoralizes the work force.

In addition, flight delays caused by FAA equipment failures increased 22 percent, more than the total delays increased between fiscal years 1985 and 1986.

Because of the current and projected staffing shortages and the time required to train technicians, we believe FAA needs to begin a hiring effort aimed at bringing its field work force much closer to the current congressionally authorized level of about 9,300.

MEASURING AVIATION SAFETY

Now to go to our bottom line. While air travel remains safer than many of the things we do in our society, we believe the evidence we have gathered over the past few years shows that the margin of safety FAA maintains through its air traffic control system and airline inspection program is not what it could be. Some steps FAA has taken to maintain safety have not been fully implemented.

FAA could increase the safety margin by acting on our recommendations, and there are other steps FAA could take to increase it even more. Neither GAO nor FAA can tell the Congress or the public when the margin is sufficient. One thing FAA could do to help the Congress understand how safe air travel is would be to identify a reasonable set of safety indicators, what we call precursors of risk, and then measure them accurately and consistently from period to period.

FAA has used three such measures, accidents, operational errors, and near midair collisions, but all are presently open to questions about their accuracy, consistency and usefulness.

Until such yardsticks can be agreed upon, we all will be feeling our way along, judging what should be done based on sometimes differing perceptions of safety in the public interest.

PREPARED STATEMENT

This concludes what I will say in my prepared statement. I will be happy to answer any questions you may have.

[The statement follows:]

STATEMENT OF HERBERT R. MCLURE

We appreciate this opportunity to comment on appropriation issues relating to Federal Aviation Administration's (FAA's) human resources, including adequate controller, inspector, and airway facilities maintenance work forces.

Our work over the past few years has shown that FAA needs more people in each of its major work forces. National Airspace System (NAS) plan delays have resulted in corresponding delays in air traffic controller and airway facilities maintenance productivity gains. And, FAA still needs more trained commercial aviation safety inspectors to effectively respond to the changes deregulation has brought to the airline industry. We therefore support FAA's request to increase the controller work force by 225 positions and the inspector work force by 178 positions in fiscal year 1988. We are concerned, however, that FAA's fiscal year 1988 budget request does not reflect realistic maintenance staffing needs.

FAA's RESPONSE TO INCREASING AIR TRAFFIC

Deregulation of domestic airlines in 1978 affected FAA's responsibilities in two ways. First, air traffic grew to record levels and is expected to continue to grow. Increasingly competitive scheduling and hub and spoke operations have created peak air traffic periods placing extra demands on the air traffic control (ATC) system.

Even before deregulation, FAA knew that air traffic would continue to rise through the turn of the century, placing unprecedented demands on the ATC system. FAA also knew that meeting these demands safely and efficiently would require improved and expanded services, additional facilities and equipment, improved work force productivity, and the orderly replacement of aging equipment. So in December 1981, FAA published a comprehensive NAS plan to modernize, automate, and consolidate the existing system.

In terms of dollars spent, the NAS plan is one of the largest single civil procurement programs ever, costing more than $16 billion by the year 2000. FAA believes the plan represents a practical way to achieve a significantly more efficient system while reducing the risks of mid-air and surface traffic collisions, landing- and weather-related accidents.

One NAS plan goal is to increase the productivity of various FAA work forces. Air traffic controller productivity is to be increased by an Advanced Automation System. Five years into the plan, however, the system has experienced schedule delays totaling 8 years resulting in corresponding delays in anticipated productivity gains. Meanwhile, FAA has not rebuilt the air traffic control workforce to its current staffing standards and goals.

The net result of FAA's actions to date is that FAA has fewer air traffic controllers now than it did in 1981 to handle more traffic within the same ATC system. FAA maintains that the system is presently operating safely and that there were more air traffic controllers than were needed before the 1981 strike.

We reported in March 1986[1] that during 1985 we had surveyed the controller work force including supervisors and managers, and found that they thought they were being stretched too thin. They believed the situation could impair their ability to maintain the proper margin of safety. Also our consultant, the Flight Safety Foundation, concluded that the ATC system was not as safe at the time of our survey as it was before the 1981 strike. We concluded that FAA could not quickly increase the number of air traffic controllers or provide new equipment to reduce their work load, leaving it only two choices: continue to stretch the controllers or limit air traffic. We recommended limiting traffic, but did not specify where or how. We did not have in mind a general limitation on the total quantity of air traffic, but rather limits on the quantities of air traffic in FAA's busiest control sectors at their busiest times. In other words, we believed that FAA should do more to tailor air traffic to the capabilities of its air traffic controllers.

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[1] Aviation Safety: Serious Problems Concerning the Air Traffic Control Work Force (GAO/RCED-86-121, March 6, 1986).

In its response to our report and in hearings, FAA has stated that its existing traffic management system prevents controllers from having to control more traffic than they can safely handle and that the safety level of the ATC system is not being adversely affected. FAA also stated that, while controllers may perceive that they are overworked, the traffic management system includes a number of safeguards to preclude overload from happening.

In addition to its central flow control program, FAA identified the following safeguards: (1) recent improvements to the traffic management system to predict overload and alert flow control, (2) local traffic management units (TMUs) at each of the 20 air route traffic control centers in the continental United States[2] and at designated airport towers responsible for monitoring traffic flow and ensuring that safe levels of air traffic are not exceeded, (3) first-line supervisors responsible for monitoring individual sectors and adjusting traffic flows, and (4) the controllers, themselves, who are responsible for making individual judgments on how much traffic they can safely handle.

FAA believes that these safeguards, if properly implemented, should accomplish the "tailoring" of air traffic that we believe is needed. However, we recently looked into how well these safeguards were working in the Chicago area to respond to inquiries from the Subcommittee on Government Activities and Transportation, House Committee on Government Operations. We reported at the Subcommitee's February 27, 1987, hearing, that none of the safeguards were fully implemented and were not reliable means for assuring that controllers are not faced with more traffic than they can safely handle.

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[2] Air route traffic control centers, referred to as "en route centers" control flights between airports.

First, the existing flow control program is designed to control aircraft departures and en route flows based primarily on weather conditions and capacity at arrival airports rather than controller work load at the centers. Moreover, the en route sector loading program, intended to predict overloads in specific en route sectors and alert flow control, will not be fully operational for several more years because of limited computer capacity.

In addition to flow control, FAA says it looks to its traffic management coordinators, supervisors, and controllers to make judgments on how much traffic can be safely handled. But, the en route Chicago center traffic management unit was staffed with only four full-time coordinators, instead of the 21 called for by FAA staffing standards and the Chicago tower did not have a traffic management unit at all. In our 1985 survey, supervisors at the Chicago center told us they typically spent 60 percent of their time working traffic, and over 60 percent of them said that this hindered their ability to coordinate airspace and perform other procedural or operational matters. Half of them also said that they did not believe that they had sufficient say in determining the volume and complexity of traffic the controllers they supervised were expected to handle.

We also found that the hourly traffic capacity acceptance rates FAA had determined for O'Hare Airport did not directly consider controller staffing levels or the performance limits or capabilities of the controllers who are actually on duty.

So FAA's "safeguards" to preclude ATC system overload around Chicago boiled down mainly to depending on controllers to make individual judgments about how much traffic they could safely handle on the basis of their own professional knowledge, experience, and skill. While we agree that professional judgment is invaluable, we also agree with the National Transportation Safety Board's (NTSB's) May 1983 conclusion that

> "the external management of controller work load through effective traffic volume metering

> and restrictions to ATC service should continue until the effective means to measure and monitor controller proficiency and performance are in place and have been validated."

Toward this end, NTSB, in its recent study on O'Hare recommended FAA establish traffic capacity acceptance rates that

> ". . . ensure that air traffic controller staffing levels and performance limitations are accounted for appropriately and that the air traffic controller team capabilities are not exceeded during peak traffic periods."

At your request, we gathered FAA data similar to the data we gathered at Chicago for other FAA centers and major terminals, which had experienced increased air traffic activity, to determine whether similar conditions existed elsewhere in the system. As is generally perceived, we found traffic substantially higher than pre-strike levels and experienced staffing levels lower than FAA goals. We also found FAA authorized traffic management unit staffing substantially below the levels called for by FAA's staffing standard in all 16 en route centers we checked, and actual full-time staffing below the FAA-authorized levels in 11. We found full-time staffing levels below FAA-authorized levels for TMU's in 10 of the 12 towers, when applicable. And finally, we found that first line supervisors control traffic at least half of their total time in two centers and one tower.

From these data, we would conclude that the situation we found in Chicago is not unique and that there are other centers and towers in the air traffic control system where traffic tailoring based on controller work loads in peak periods may be needed to maintain safety.

FAA, with congressional encouragement, is working to increase its controller work force to 15,225 by the end of fiscal year 1988. This includes an increase of 225 in fiscal year 1988, and we believe the increase is needed. We cannot at this time, however, say how many air traffic controllers is enough.

FAA's RESPONSE TO THE NEED FOR GREATER AIRLINE SURVEILLANCE

Deregulation's second major effect on FAA came about because of the flood of new airlines and accompanying competitive fares that occurred in commercial aviation after deregulation, creating an environment which pressured airlines to contain expenditures for aircraft maintenance, flight crew salaries, and other controllable expenses--a situation that required greater FAA surveillance over airline operations and maintenance.

While the 1978 act removed government control over fare costs and schedules, FAA remained responsible for assuring that airlines comply with federal safety regulations. Until 1984, however, FAA took few steps to address the impact deregulation had on its safety inspection work load or staffing requirements. For example, between 1978 and 1983, when the number of airlines and aircraft grew substantially, FAA's inspector work force was reduced from about 1,600 to about 1,500 or 7 percent.

In May 1986 we testified that FAA could not say with assurance that airlines were complying with federal safety regulations. FAA studies--as well as those conducted by the Office of Inspector General and by us--showed that FAA's airline inspection and follow-up activities were often insufficient to identify major safety problems or to ensure that problems were corrected once they were detected. For example, FAA's 1985 Safety Activity Functional Evaluation--Project SAFE--found that FAA surveillance of airlines was often ineffective and that broad changes in FAA's inspection program were needed to improve aviation safety. Moreover, several NTSB investigations criticized FAA's inspection program and concluded that ineffective FAA inspections contributed to aircraft accidents.

FAA also concluded that it needed to improve its surveillance of airlines and, building on initiatives launched by the Secretary of Transportation, has begun to take action on a broad front. FAA had increased the size of its inspector work force to 1,919 as of the end of fiscal year 1986. FAA has established minimum inspection standards to identify what inspections need to be performed and how frequently, and affirmed that inspections--not certification of potential new airlines--are the inspectors' number one priority. FAA has also begun to address needed improvements in its internal controls and management information systems.

FAA expected to increase its number of inspector positions in by the end of 1987 to 1,975 and has requested an additional 178 inspector positions in fiscal year 1988. Even with these additions, though, it will be years before all the needed improvements in inspector hiring, training, and guidance are implemented; important regulatory revisions are completed; nationwide minimum standards, for the type and frequency of airline inspections, are revised to include characteristics that indicate possible safety deficiencies at a given airline; and adequate internal controls and management information systems are in place.

While FAA's requested increase in inspector positions is apparently warranted, FAA cannot at present know how many inspectors are needed or where they should be assigned. FAA does not now have agencywide inspection standards that permit an accurate analysis of staffing needs; current inspection guidelines specify only minimum inspection requirements applicable to all airlines. As a result, FAA's current staffing estimates are based on judgments that are not supported by guidance to inspectors on how many inspections should be performed. Our report, which discusses these issues will be out within the next several weeks. We will recommend improvements in FAA's staffing standards to address this problem.

FAA RESPONSE TO AN AGING AIRWAY FACILITIES MAINTENANCE WORK FORCE

Competing budgetary priorities and FAA's commitment to reduce airway facilities maintenance staffing as part of the productivity gains to be derived from the NAS plan have caused a shortfall in the funding available for FAA maintenance staffing. Until recently, FAA has not filled maintenance vacancies because of hiring freezes and personnel restrictions and during fiscal year 1987, FAA plans to maintain staffing at a level 16 percent below the field's work load as projected by FAA's maintenance staffing standard.

Last year, the Congress restored the number of Full Time Equivalent (FTE) maintenance employees FAA proposed to cut. We believe that FAA's fiscal year 1988 budget request once again does not realistically reflect maintenance staffing needs.

FAA should hire in advance of attrition for the maintenance work force to allow time for training. By 1990 about 2,500 of FAA's 8,300 engineers and technicians will be eligible to retire. By 1995 almost 60 percent of the maintenance work force will be retirement eligible. Because training takes from 2 to 5 years, FAA needs to begin hiring people now to establish a pipeline for when these technicans leave.

So far, FAA has been hiring only to fill vacancies when they occur. This approach replaces qualified, experienced technicans who can carry full work loads with inexperienced technicans who will need extensive training, and results in inefficiencies and skill shortages, reduces total routine maintenance, increases equipment outages, and demoralizes the work force. In addition, flight delays caused by FAA equipment failures increased 22 percent more than total delays increased between fiscal years 1985 and 1986.

Because of the current and projected staffing shortages and the time required to train technicians, we believe FAA needs to begin a hiring effort aimed at bringing its field work force closer to the currently congressionally authorized level of about 9,300.

MEASURING THE LEVEL OF AVIATION SAFETY

FAA's human resource problems are often cited as affecting the level of aviation safety. This perception is bolstered by surveys over the last 2 years, including the Air Line Pilots Association's June 1986 survey of its members and our 1985 survey of the controller work force. Both of which suggested that the level of aviation safety had declined.

FAA, on the other hand, points to an aviation accident rate that has fallen over the last 2 decades as an indication that the level of aviation safety has increased. The aviation accident rate, however, may not be the best indicator of the margin of safety in our national airspace. This is because many different things usually have to go wrong before an accident occurs. Investigators have observed that unsafe operating practices do not inevitably lead to accidents and, unfortunately, accidents can occur in even the best managed airspace. In either case, accidents occur so rarely that they cannot be used alone to analyze aviation safety.

For these reasons, more specific measures--precursors of safety risk--are needed to identify and direct attention to unsafe or high-risk conditions. FAA uses two precursors, near mid-air collisions and operational errors, as additional indicators of national airspace safety. Near mid-air collisions are classified by FAA according to the degree of hazard to air safety. According to FAA, a near-mid air collision could potentially occur when two airborne aircraft inadvertently come within 500 feet of each other. Operational errors occur when there is less than the applicable minimum separation distance between two or more aircraft or between an aircraft and terrain or obstacles and obstructions. In its July 1986 response to our March 1986 report on the controller work force, the Department of Transportation said that a major indicator of how safely the system is being operated is the number of operational errors that occur over a given period of time.

Recent fluctuations in these two safety indicators have resulted in calls for changes to the ATC system. We must caution here that, while near mid-air collisions and operational errors may be good indicators of national airspace safety, we have not evaluated how accurate FAA's data may be or whether the data are consistently collected from year to year. For example, in 1985, FAA implemented a monitoring system intended to enhance the reliability of the near mid-air collision pilot reporting process. According to the FAA, the new system contributed to a rise in 1985 pilot report totals compared to prior years.

FAA has not yet identified precursors of risk to indicate how safely airlines are operating and maintaining their aircraft. We have suggested the frequency and severity of airline noncompliance with safety regulations and standards over time as one possibility. Changes in the total number of safety deficiencies and the frequency of those considered to directly or adversely affect safety could be used to indicate whether an airline's level of safety has changed from year to year and where additional FAA inspections may be needed. But, FAA would have to improve its inspection guidance and management information system before adequate and comparable data could be available to use as risk precursors.

THE BOTTOM LINE

We believe our recommendations for maintaining air traffic control system safety and enhancing the effectiveness of FAA's airline inspections are still appropriate. We also believe FAA should take steps to improve its air traffic control equipment maintenance including hiring and training additional technicians. This subject will be discussed in more detail in a report we expect to issue this summer. We believe increases are needed in each of these work forces.

While air travel remains safer than many things we do in our society, we believe the evidence we have gathered over the past few years that the margin of safety FAA maintains through its air traffic control system and airline inspection program is not what it could be. Some steps FAA has taken to maintain safety have not been fully implemented. FAA could increase the safety margin by acting on our recommendations and there are other steps FAA could take to increase it even more, but neither GAO nor FAA can tell the Congress or the public when the margin is sufficient. One thing FAA could do to help the Congress understand how safe air travel is, would be to identify a reasonable set of safety indicators, what we call precursors of risk, and then measure them accurately and consistently from period to period. FAA has used three such measures, (accidents, operational errors and near mid-air collisions) but all are presently open to questions about their accuracy, consistency, and usefulness.

Until such yardsticks can be agreed upon, we all will be feeling our way along, judging what should be done based on sometimes differing perceptions of safety and the public interest.

This concludes my testimony, Mr. Chairman. I will be happy to answer any questions you or other Subcommittee Members may have at this time.

GAO STUDIES OF FAA WORK FORCES

Senator LAUTENBERG. Thank you very much. We are not reassured by your testimony. Nevertheless, we are grateful for it and the candor with which you dealt with the issues.

Once again, before any questions I want to acknowledge the outstanding support that we have gotten from the General Accounting Office. Your testimony shows that GAO has spent a considerable amount of effort in reviewing FAA management, and three groups of employees that are essential to the operation of our air traffic control system, the controllers, safety inspectors, and maintenance specialists.

Based on your work what common themes, if any, underline the problems you have found?

Mr. MCLURE. I think there are several. One is that across its various work forces FAA does not have as many people as it needs to carry out the functions that they have laid out for themselves.

A second common theme is an interesting one, and that is that FAA's experienced people are, for the most part, close to retirement, and FAA is going to have a very significant problem replacing people over the next several years as they retire. That leads to a third common theme which is FAA is going to have both a large training problem, and is going to have a lower level of overall experience than they presently have as those more experienced people leave.

Senator LAUTENBERG. We talk about staffing levels. We talk about potential retirements. How about the sensitivity of FAA to the views of the staff? Do you look at that at all? What have they learned in your view, if anything, from the controller work force, from the various skills that we talked about? Do you think that they are tuned in to the problems that the people on the line see?

Mr. McLURE. That is a question that—it is easy for me to give you a quick answer on that one, but there are a lot of people in FAA. A lot of them are very good managers who are attuned to the work forces they work with.

Looking at the evidence that I have been looking at over the past decade or so, though, what strikes me more than anything else is the number of times that FAA announces changes that affect its air traffic controllers where the air traffic controllers immediately say they never asked us, or they never consulted with us, or we do not agree with that change.

I know FAA is aware that the air traffic controllers frequently feel that they are not sufficiently consulted in the kinds of things that happen. They have a human resource management program that they have elevated to the associate administrator level. So I believe FAA is aware and would choose to do something about that situation. Nevertheless, it persists, and persists right up to the last several months.

You have noticed yourself in the news several times the air traffic controllers have said they are imposing something on us that we are not sure will work, and they have not really consulted with us.

MORALE SURVEYS

Senator LAUTENBERG. Did you, in your investigation, try to examine the morale factor at all?

Mr. McLURE. We asked questions about morale when we surveyed the air traffic controller work force in 1985, and we got many responses, a fair percentage of responses, that said morale was not good and that in a variety of ways expressed concern about the quality of FAA's management of the work force as a whole.

Senator LAUTENBERG. That was in 1985?

Mr. McLURE. That was in 1985.

Senator LAUTENBERG. You did not review that question at all in this last study?

Mr. McLURE. No; we have not updated that information. Tom, though, and the work we have been doing connected to the maintenance work force, has found similar situations with the maintenance people where they are being asked to do so much and feel so strung out that their morale was also being reduced.

Mr. BARCHI. If I could answer that, FAA did an employee survey in 1986, the results of which they published. One interesting statistic in there is that 44 percent of those that responded cited management practices as an overwhelming factor in stress and stress-related actions to their work, which is a telling commentary of FAA management.

INCREASED STAFFING NEEDS

Senator LAUTENBERG. Is that only in one of the functions?

Mr. BARCHI. It is across the board, all work forces.

Senator LAUTENBERG. You did not extend that any further, you did not interpret it in terms of directly to the morale question? They talked about increasing stress. Did they complain about anything else in the process? In your view, and if you are not prepared to answer this, please do not, did they indicate to you that FAA in any way was not stepping up to its staffing requirements? That they were not willing to fill the posts that were open to bring in the population level of skilled people that they needed? Did you hear that as a criticism or complaint among those whom you interviewed?

Mr. BARCHI. As it relates to the airways facilities technician work force, yes, we did hear that commentary, primarily from managers in the field in terms of their current situation and the anticipatory retirements of that work force. There is a great deal of concern over the fact that it requires anywhere from 2 to 5 years to sufficiently train an individual to bring them up to the level that they currently have. Field managers indicated that that pipeline was not being established.

Senator LAUTENBERG. Were you able to discern whether or not these people felt that FAA was giving it an earnest try, or whether or not they were just dragging their feet for budgetary or other reasons?

Mr. BARCHI. It is a difficult question to answer. The general impression would be they were giving it a valiant effort, and had, in fact, forwarded their request to FAA headquarters.

What we did see basically is in that particular work force it was, for all practical purposes, taking a back seat, if you will, to FAA's actions to hire more controllers and more inspectors.

Mr. MCLURE. I think FAA is being whipsawed, as are many agencies, by the budgetary situation, and the fact that they cannot meet all their needs.

REHIRING FIRED CONTROLLERS

Senator LAUTENBERG. Did the subject come up about the rehiring of any of the fired controllers in your interviews, in either 1985 or current?

Mr. MCLURE. We did a later survey of air traffic controllers specifically to answer the question of whether they thought they would be comfortable if fired controllers were rehired. We found that more than half said they did not think that would be a good idea primarily for morale reasons, although most acknowledged that that fired work force did present a pool of people who could be rapidly retrained and had already demonstrated the aptitude for doing the air traffic controllers' job.

Senator LAUTENBERG. Yet they acknowledged that excessive stress, or additional stress, was put upon them by virtue of inadequate staffing?

Mr. MCLURE. Yes; in an earlier survey the air traffic controllers were very clear that they did not think there was sufficient staff.

Senator LAUTENBERG. We are not certain whether there was a general apprehension or aversion to hiring these fired controllers, or whether there might be a problem with morale. You said that more than half felt they would not be comfortable?

Mr. McLure. Yes.

Senator Lautenberg. That means more than half could be 51 percent, or it could be 90 percent. I do not know whether you have a feeling for the quantity of lack of support there.

Mr. McLure. I do not remember the exact number. It was more than 51 percent though. It was in the range of 60 to 70 percent as I recall it. I can give you the specific numbers from that report.

Senator Lautenberg. That was 1985?

Mr. McLure. That was at the end of 1986. We reported that in about October of last year.

MEASURING AVIATION SAFETY

Senator Lautenberg. You said in your statement that FAA does not have effective measures of how well it is maintaining aviation safety. You talked about some kind of a yardstick, and that better measures may help us judge whether FAA is able to do its job well with the resources that it has.

Would you give an opinion as to what Congress might do to get these measures established.

Mr. McLure. I have been struck over the years by the fact that we referred to different statistics at different times for different reasons, depending on what we want to show. FAA right now refers to accidents to show that their system is safe because they have not had an accident for a while.

We do not think accidents is a very reliable measure because they really are accidents. They can occur even when everything is going right and do not necessarily indicate that there is anything wrong with the system.

I am pretty confident that Mr. Engen would not, if there were an accident, which I hope there is not anytime soon, he would not come back to the committee and say as a result of that accident we conclude the system is not safe.

We just do not think accidents is a very good measure simply because they do not happen often enough, which we are very grateful for.

Senator Lautenberg. Are we lucky because we have not had any?

Mr. McLure. That is a matter of opinion whether that is luck or—I think not. I think the system operates safely. I think it is quite a safe thing. What I think we need is some common agreement on some measures that do express what the safety of the system—which direction it is heading.

You will never get an exact idea of how safe it is, but if you had some measures that we all agree actually measure which direction we are heading, then we could look back at those measures from period to period and say, well, things are not going as well this year as they went last year.

Near midair collisions is that kind of thing. Unfortunately, I am not very confident in the statistic itself because it is a voluntarily reported measure, and I am not sure that all of them are reported. Operational errors I think is a better measure in the sense that it is more accurately reported because it is automatically reported by the air traffic control equipment.

I think there ought to be a set of those measures that we agree on. So what that implies to me is we need a method for agreeing what the set of measures are, and it seems to me that FAA and several others could appropriately have roles on getting together and presenting to Congress a list of measures and how they will be calculated from period to period consistently—part of the problem with the measures they have now is they change the way they collect the measure over the years.

Senator LAUTENBERG. And some benchmark with which to make comparisons.

MAINTAINING SAFETY REQUIREMENTS

One last question before I turn the questioning over to my distinguished colleague. Since we do not have a measure that we can point to with some degree of reassurance, what can we do in the meantime to assess how well the safety requirements are being maintained?

Mr. McLURE. The kinds of things we and you have been doing, which is to look at the staffing levels, to look at FAA's performance from period to period and which direction they are moving, and how willingly they seem to be moving in those directions. We are still going to be faced with the fact that those are pretty imprecise measures and we do not really know which ones count at this time.

Senator LAUTENBERG. Thank you, Mr. McLure. Senator D'Amato.

CONTROLLER WORKLOAD LIMITS

Senator D'AMATO. Thank you, Mr. Chairman. First of all, let me, Mr. McLure, give you our thanks for what I believe has been a very important and excellent report by the General Accounting Office. You and your associates have done a good job.

We, the Congress and the administration, will be failing in our job unless we are able to take from that very factual report that you have submitted to us with many hours of expertise and work that went into it and attempt to implement some of the areas of concern that you raise and some of the suggestions that you and others have made. I am most interested as it relates to the tower control resting in the subjective judgments, as you characterize it, of the flight controllers, the controllers themselves, in terms of just how much they can handle as opposed to there being some external guidance.

Are we not really, in laymen's language, talking about setting limits in terms of how many planes should be permitted into an area at a particular time?

Mr. McLURE. We think so. If you mean by area the sector that an air traffic controller has to manage.

Senator D'AMATO. Correct. And do you recommend that there should be at peak times these limitations that are placed to control the amount of traffic that is permitted into a sector at a particular time?

Mr. McLure. Yes.

Senator D'Amato. Have you discussed that with the FAA, that particular recommendation, as opposed to having it as catches as catch can? That is the present system basically, is it not?

Mr. McLure. FAA says not. FAA believes that they presently do have the capability to manage the traffic as it moves from sector to sector. What was important about what we learned in Chicago was that those things that FAA say exist to do that do not necessarily exist. The central flow control, for example, which we certainly think is a good idea, however——

CENTRAL FLOW CONTROL

Senator D'Amato. What is the central flow?

Mr. McLure. FAA has a central system to meter traffic based on the acceptance rates at the airports to which the traffic is going. Basically FAA works from the overall airline schedule to determine which airplanes are going where. Then they check with the airports around the country to see what the weather and acceptance rates are going to be at those airports during the period of time they are looking at, and they do not allow planes to take off unless they are sure that there will be space at the airport to which the airplanes are going for them to land.

Now, that considers only the acceptance rate and the weather. It does not really look at the individual traffic sectors along the way that individual air traffic controllers have to keep track of.

FAA will be able to do that at some point in the future. Right now they do not have the computer capacity. They have two competing methods of doing that, one is a distributed method, and one a central computer. They are right now in the process of deciding which way to go to develop that capability.

Right now they do not consider individual sectors. So along the way to an airport there may be more airplanes in individual air traffic controllers' sectors than they are comfortable handling. Similarly, FAA says they have traffic management units which watch the individual sectors and make sure they do not become overloaded and can reroute traffic to make sure that does not happen. Because of the staffing situation, many of the those traffic management units are understaffed, certainly far under what FAA has authorized, and even further under what their staffing standards call for.

TRAFFIC MANAGEMENT UNIT STAFFING

Senator D'Amato. When we talk about the air traffic managers that are part of the plan but really are not there in certain cases, how many would you suggest, if you are in a position to tell us, how many constitute that shortage? What is that shortfall?

Mr. McLure. FAA's staffing standard calls for 21 people in a traffic management unit in an en route center. FAA averages around 10 in those units, which is fairly close to their authorized levels. FAA does not authorize staffing up to what the standard calls for is what I am trying to say there.

In some cases the actual staffing is about the same as the authorized level, but in 11 of the 16 centers we looked at recently it was below the authorized level. In some cases far below.

FPL CONTROLLER COUNTS

Senator D'AMATO. Could you explain for us the inconsistency as it relates, and it is a rather specific inconsistency on page 12 of your report, FAA staffing. When one goes down we see continuous the authorized level for 1987, for example, in Boston was 307. The FAA indicates there is 165 controllers, FPL controllers, and your figure comes up and says there is 134. That is a substantial difference. They say they have 165. You come up and say there are 134.

Did you bring this to the FAA's attention in an attempt to reconcile those figures, and if you did, what was their explanation for the differential?

Mr. McLURE. FAA is aware that there is a difference over the course of a month, or even longer, between what their personnel system shows the number of people they have at any location and the number of people that are actually out there.

That is because, mainly because, the personnel system counts someone as a full-performance-level controller based on their grade level, their pay level, although those people may not actually be an FPL. For example, a grade 14 may be an FPL, but because you are a grade 14 does not necessarily mean that you have qualified in all the sectors that you need to qualify in to become an FPL.

So the actual count is frequently different than the pay count.

Senator D'AMATO. What you are saying is although the FAA may be—their personnel—may be characterizing someone as a fully qualified controller, the fact of the matter is that in essence they are not?

Mr. McLURE. At any given point that is correct.

FACILITIES MAINTENANCE STAFFING

Senator D'AMATO. Have you had an opportunity to review—your testimony indicates that the FAA plans to maintain staffing at a level of 16 percent below the field's workload as projected by FAA standards. What will that do?

Mr. BARCHI. It raises serious questions for that work force in terms of carrying that workload, and in terms of maintaining the efficiency of the system there is a real concern in terms of just how well they are going to be able to respond from a maintenance standpoint to maintaining the system.

Senator D'AMATO. You have also indicated in your testimony and in the report that there is a morale problem with respect to the employees vis-a-vis management. That seems to be the big problem, but there is a morale problem, is that correct?

Mr. BARCHI. Yes; that is correct.

Senator D'AMATO. Would you attempt to characterize it? Is it serious?

Mr. BARCHI. My reaction to it is, yes, it is serious. To FAA's credit, I think we need to point out that they are aware of that situation. In 1985 they did implement a human resource management effort, which, as the Administrator has outlined, tries to address that issue.

AVIATION SAFETY

Senator D'AMATO. Would I be overstating it if I indicated that it would appear from your report that there are serious concerns that you have raised as it relates to the safety of the program as it is being administered?

Mr. MCLURE. I do not think so. The way I would say it is the safeguards FAA say exist throughout the system are not necessarily there. As a result, the metering of traffic that they rely on to make sure that individual controllers are not overloaded is also not there.

Senator D'AMATO. What would you say as regards to the increase in the numbers of incidents, accidents regularly from 1985, to 1986, to 1987? Is that a pattern that disturbs you, and do you believe that steps could be taken to reduce those so-called near-misses?

Mr. MCLURE. As I mentioned earlier, I am not overly trustful of the near-miss statistics. I cannot sit here and honestly say to you that for sure those statistics are headed in one direction or another because there have been changes in the methods they use to collect the information, and they are voluntarily reported. So a pilot can choose to ignore reporting them and FAA will not find that out.

So those numbers could be either higher or lower. They could be higher than they actually are in any one period. It is not likely they are lower.

NEAR-MISSES

Senator D'AMATO. You are saying that is not a trend which is particularly, in and of itself, disturbing to you?

Mr. MCLURE. I think it is disturbing to anybody. Nobody likes there to be near-misses in the system. FAA has mentioned to us that most of those near-misses involve small private airplanes encroaching in areas where they probably should not be.

My personal reaction to that is the air traffic control system's responsibility is to preclude that from happening, and that simply because a pilot goes somewhere they should not be does not really relieve FAA of its responsibility to take steps to keep that from happening. I think the statistics do show that FAA knows what the largest risks are in the system. They know that private airplanes being where they should not be is a large risk. They know that weather is a large risk. They know which kinds of things they ought to be focusing on in order to improve the system.

Senator D'AMATO. One final question, Mr. Chairman. I make an observation that Jim Burnett, head of the National Transportation Safety Board, is going to be making some formal recommendations. He is concerned and he indicated that in 1986 there were 57 near collisions in which commercial planes, "missed merely by chance." He says, "Whether these incidents are due to controller error or pilot error, equipment failure, or a combination of factors, the question is would it not be appropriate to consider some reduction in flights?"

Now you know we come right up to the point and then we stop a little bit short, yourself included, notwithstanding that I indicated I think you have done a heck of a job. If you tell me that you are really not concerned with the pattern which seems to indicate that there are more of these near-misses taking place, I suggest to you that it is a little equivocation, and maybe you do not want to be caught on the horns of that dilemma. Someone has to fish or cut bait.

Is the system becoming more crowded, more dangerous because there is a lack of qualified controllers and the system has not been fully implemented, the safety system, so that it would necessitate some unusual steps like attempts to regulate and reduce the number of flights into a particular area or sector at a particular time?

Mr. McLURE. We have said very clearly we think traffic should be limited, and we agree with Chairman Burnett about that.

I also am disturbed by near-misses. I am just trying to tell you that you cannot be certain that those numbers are necessarily correct.

NEAR-MISSES AND RUNWAY INCURSIONS

Senator LAUTENBERG. Thank you, Senator D'Amato. The frustration that we all feel, that you so strongly exhibit, is our inability to pin something down here that tells us what some of the risks are in flying today. I understand, Mr. McLure, your reluctance to simply classify information as conclusive evidence that there is trouble afoot. You seem to be working with the shortage of staffing and things of that nature.

I do submit to you that near-misses can often turn into something rather ghastly in very short periods of time, and in terms of magnitude, enormous potential tragedy, regardless of whether it is a small private plane that takes down a larger commercial plane, whether it is an airplane falls in a schoolyard with children in it, or whether it is the kind of accident that we have seen at Teterboro Airport where two general aviation planes collided. The potential for enormous havoc is certainly there.

How about runway incursions? That is almost, I believe, exclusively under the management of the tower. Of course, someone could violate that. I flew last week with a reporter in the airplane. Unfortunately, we had an opportunity to observe two small airplanes a lot closer than I like them to be. I fly a lot in small aircraft, two, three, four times a month. You get a different look at things when you have a lot of glass around you than when you are sitting in the passenger's seat.

What about those runway incursions? In 1984, we saw 77. In 1985, 104. A preliminary count for 1986, 115. These are very dangerous situations. There is maneuverability in the skies even at a fairly late point if you see what is happening. On the ground it is very tough to get away from a potential collision.

Does that give you some evidence that you feel is fairly conclusive about some of the dangers that exist within the system as it is presently staffed?

Mr. McLURE. Yes; although we haven't looked at those specifically, but that certainly is one of the things that Chairman Burnett is concerned about, and one of the sources of his recommendation.

Senator LAUTENBERG. I think we would like to believe that a near-miss is something you have to worry about. Though I respect your responsible attitude in saying let us get something that is fairly comprehensive that we can all look at and say, OK, it is not just the coincidence of airspace because 500 feet is too close for comfort. On the other hand, there is still a lot of maneuvering room in there.

We think that, and I speak for myself, that near-misses indicate that something is terribly wrong, and that the change from that kind of a statistic to an enormous tragedy is really relatively miniscule.

Mr. McLURE. Please do not misunderstand me. I agree with that. Nobody wants to be in a near-miss. Although I would rather be in a near-miss than a crash.

CONTROLLER EXPERIENCE AND TRAINING

Mr. BARCHI. If we could go back to one point that you made, Senator, and I think it is important to bring out here in terms of runway incursions. What we are beginning to get a sense of is a lot of that can be directly related to the experience level and the training of the individuals in the various control positions.

Clearly we believe that is an issue that needs to be evaluated in some detail. What is the quality of training of these individuals as they are coming out of the academy and being put in these pressure packed kinds of situations? That is something we look forward to doing for the Congress and providing some insights.

Senator LAUTENBERG. We will be asking you for that. I was on the radio in a small aircraft in Massachusetts, and I happened to pick up the radio to talk to the tower. I was listening to him scold everybody in the field, very sarcastic in tone. He is not there to observe Miss Pretty manners obviously. He is not supposed to be nice and gentle up there. He is supposed to be crisp and forthright. He was very sarcastic.

I happened to ask him a question about a jet in front of us, and he said "get off the air" essentially. I went into the tower. When he learned who it was that he was talking to on the radio he was a little bit chagrinned and he said, "Well, we are under a lot of pressure here and we do not have time for some of the things that we would like to do."

Well, that is too bad. Either he is overworked, or he is personally overstressed. I said to him, "You ought not to be here if that is the kind of condition." He said, "You cannot help it with the volume of work that we have to do here."

There is that factor there. We thank you very much. Senator, do you have anything else?

Senator D'AMATO. No.

Senator LAUTENBERG. Thank you very much for being with us. We would invite you to stay in case there is a question that has to go back to you.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

STATEMENT OF DONALD D. ENGEN, ADMINISTRATOR

ACCOMPANIED BY:

- **B. KEITH POTTS, ASSOCIATE ADMINISTRATOR FOR AIR TRAFFIC**
- **CHARLES E. WEITHONER, ASSOCIATE ADMINISTRATOR FOR HUMAN RESOURCES MANAGEMENT**
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- **EDWARD T. HARRIS, DIRECTOR, AIR TRAFFIC PLANS AND REQUIREMENTS SERVICE**
- **NICHOLAS S. STOER, DIRECTOR OF BUDGET**

INTRODUCTION OF WITNESS

Senator LAUTENBERG. Now I invite Admiral Engen. I want to welcome you, Admiral Engen, to this, the last of your appearances in your present capacity. This is not my idea of an appropriate going away party, but you are a man with experience over relatively demanding jobs. Therefore, we know that you will take the criticism that you have heard as being constructive in the interest of air travel and this agency which you have helped move further toward meeting the needs for the next decade.

We are pleased to see you and your associates, and we invite you to make your testimony in as short of form as possible, but we do not want to deprive you of being responsive to the concerns that you know we have. Proceed.

STATEMENT OF DONALD ENGEN

Admiral ENGEN. I appreciate the opportunity to be here. I appreciate the opportunity to respond to your questions later on. You are right, I have spent my entire life dealing with the kinds of things we are going to talk about today. I will keep my remarks very short and submit a statement for the record. I will probably break them in two and perhaps tomorrow address the NAS plan and the facilities and equipment issues. That way I will keep these comments somewhat shorter.

AIR TRAFFIC SAFETY

I am pleased to say the past year has been a good year for aviation, regardless of what you fine gentlemen have said, and, in turn, for the FAA as well. The safety record of the air transportation system with commercial and general aviation has been outstanding. That does not come by accident. We handled more traffic than ever before, and we did so safely. We made further solid progress in rebuilding the air traffic control system and revitalizing our safety inspection programs.

While I am pleased with this continued positive momentum, much remains to be done. That has always been the case in aviation because of its very dynamic nature. The budget we are requesting for fiscal year 1988 recognizes those additional needs. It addresses the need for continued additional staffing in key safety areas and provides the basic resources necessary to promote safety and improve our air transportation system, including the requirements for us to maintain the basic thrust of the National Airspace System Plan as I will discuss later.

It is important for the committee to know that the air traffic control system handled safely an unprecedented number of flights this past year. The increase in calendar year 1986 over 1985 was approximately 4 percent at our 22 pacing airports, and 20 air traffic control centers in the continental United States. The rate of growth this year is at least as strong as it was last year. The American traveling public continued to receive from the air traffic control system the highest levels of safety afforded by any air traffic control system in the world.

AIR TRAFFIC DELAYS

I, too, share your concern for operational errors and for pilot deviations. I work on this daily to address those errors, if you will, of human factors. I share your concern with the level of delays that the passengers have experienced. These delays have resulted from a combination of factors, the shortage of airport capacity in some key areas, airline scheduling practices, unfavorable weather, and increased operations.

We must vigorously address the delay issue as well and maintain our safety vigilance. We cannot let go of our safety vigilance. I know you feel that way as well. I can assure you that this problem will continue to receive our full attention. Delays are a local community problem as well. We need more major airports, and they do not come cheap. Our mandate is to accept all air traffic presented to us. Our safety valve is flow control. We may have more delays, but we will maintain safety, and I am dedicated to that.

CONTROLLER WORK FORCE

We meter traffic today on an hourly basis, and we have control of the flow of air traffic throughout these United States. We achieved our fiscal year 1987 controller work force goal of 15,000 at the end of March, some 6 months ahead of schedule. Last week your committee set a September 30, 1987, work force goal of 15,225, or about 2 percent more air traffic controllers than we have today.

Our training of controllers also continues at a pace so we can handle this change. We are going to get there. It will not be without difficulty, though, because it will increase our fiscal year 1988 costs above the level assumed in our budget.

For fiscal year 1988 we are seeking a controller work force of 15,225 to meet the expected demands on the system. This includes the amount called for by our staffing standards, plus over 500 additional personnel for our training pipeline, as well as to cover unscheduled requirements.

Systemwide, as of the end of March, we had achieved a level of 9,565 full-performance-level controllers, and our goal for September 30, 1988, is 10,258 full-performance-level controllers. We will continue to ask for higher levels in the future in consonance with the continued growth of air traffic.

FAA HUMAN RELATIONS

We have also continued our intensive efforts within the agency to foster participation of our work force in bringing about positive change to improve the human relations climate throughout the agency. As I have stressed repeatedly, this is a long-term project. Employee and management attitudes and expectations simply do not change overnight, nor can we expect them to. We must continue to seek positive change in these areas, and we are bringing about that change.

For example, this past year in the human resource management area we completed our second employee attitude survey, which you discussed a little bit previously with Mr. McLure. We completed a test on improved ways to identify and select future air traffic control supervisors which included peer and subordinate assessments of supervisory candidates.

We established a pilot program to apply participative management to our unionized sector of our work force. We completed a competitive selection to develop a modern management training facility. And, but not lastly, we completed a review of supervisory training needs based on functional and competency requirements.

In addition to our efforts to improve working climates in our respective work places for employees, we continue to provide our employees with the very best tools to perform their jobs with the highest levels of safety and efficiency.

NAS PLAN IN BRIEF

The National Airspace System Plan is intended to help achieve that objective, and we can talk tomorrow about that. Last year we subjected all of the NAS plan projects to a careful review of their schedules and costs. This was a midcourse correction, if you will, for the NAS plan. Again, tomorrow, I would like to talk more about that.

We have achieved a variety of additional NAS plan accomplishments including host computer deliveries, award of contract for additional long-range radars, issuance of contract award for airport surface detection equipment radar to improve our ground surveillance at airports, and the delivery and commissioning of additional Model 1 systems for our flight service stations.

AVIATION SAFETY INSPECTORS

We have continued emphasis within the agency on improving our overall safety surveillance program, and fulfilling my commitment to achieving adequate aviation safety inspector work force at a level we can reasonably integrate into our work force. We are requesting an additional 178 aviation safety inspectors and 50 support person positions in the fiscal year 1988 budget.

Staffing levels in 1984 proved to be the most serious impediment to achieving appropriate levels and kinds of surveillance necessary for the aviation industry. The additional staffing we have achieved so far has helped significantly in improving our coverage of the industry. We see the need to increase the work force further to match the constant air carrier growth.

As another means of improving our coverage, we have continued to refine our surveillance program and effectively target our resources where they would do the most good. It remains our objective to see that every component of the aviation industry is inspected at least once during each year, and then subjected to an indepth inspection on a recurring basis.

AVIATION SECURITY

Aviation security remains a highly visible and high-priority program within the agency. The threat of international terrorism continues at unprecedented levels. Our civil aviation security program has been tailored and revamped to meet this changing threat. We have engaged in a far more ambitious program of international airport assessments than ever before. We have comprehensively and fully reviewed security at airports throughout the United States.

Given the continued need for a strong emphasis in our civil aviation security programs, and in order to more effectively meet our increased international airport assessment, we are requesting an additional 87 positions in security in the fiscal year 1988.

FISCAL YEAR 1988 BUDGET HIGHLIGHTS

Our fiscal year 1988 budget represents a 20-percent increase over our 1987 enacted level. Our fiscal year 1988 request for the operations appropriation requests $3.248 billion, and 45,044 direct positions, for an increase of $465 million over the enacted level in budget authority, and a decrease of some 225 total positions in the agency.

Reasons for the funding increase include increased controller, aviation inspector, and security specialist staffing and related training, and costs associated with the January 1987 pay raise, the new Federal Employee Retirement System, leased communications, and the commissioning of six automated flight service stations.

To fund the centralized administrative function of the agency we are seeking $38.1 million for the headquarters administration program.

PREPARED STATEMENT

In closing, Mr. Chairman, I want to express my deep appreciation for the support that the FAA has received from the members of this subcommittee. I am confident that I can count on your continued support in assuring that the FAA is provided adequate resources to meet its critical safety functions on behalf of the American traveling public.

That does complete my statement, sir.

[The statement follows:]

STATEMENT OF DONALD D. ENGEN

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE, I WELCOME THIS OPPORTUNITY TO DISCUSS OUR BUDGET REQUEST FOR FISCAL YEAR 1988. THIS REQUEST IS IN KEEPING WITH THE ADMINISTRATION'S GOAL OF ACCOMMODATING SAFELY THE RAPID GROWTH IN AIR COMMERCE WHILE MAINTAINING THE MOMENTUM OF THE NATIONAL AIRSPACE SYSTEM (NAS) PLAN. OUR REQUEST WILL ALSO PROVIDE THE INCREASED NUMBERS OF AIR TRAFFIC CONTROLLERS AND AVIATION SAFETY INSPECTORS REQUIRED TO ACCOMMODATE INCREASED DEMANDS FOR THEIR AVIATION SERVICES.

FOR FISCAL YEAR 1988, WE REQUEST TOTAL BUDGET AUTHORITY OF $5.8 BILLION, AN INCREASE OF $963 MILLION OVER THE FISCAL YEAR 1987 LEVEL WHICH INCLUDES $48 MILLION FOR THE FEDERAL EMPLOYEE'S RETIREMENT SYSTEM AND $44 MILLION FOR THE JANUARY PAY RAISE. APPROXIMATELY 85 PERCENT OF FAA'S FISCAL YEAR 1988 BUDGET IS PROPOSED TO BE FINANCED BY THE USERS OF AVIATION SERVICES THROUGH THE AIRPORT AND AIRWAY TRUST FUND.

MR. CHAIRMAN, BEFORE ADDRESSING THE FISCAL YEAR 1988 BUDGET REQUEST, I WILL MENTION SOME OF THE FACTS THAT HAVE AFFECTED THE FAA AND AVIATION THIS PAST YEAR AND HIGHLIGHT SOME OF THE SIGNIFICANT ACCOMPLISHMENTS THAT HAVE BEEN ACHIEVED THROUGH THE WORK OF THE FAA, THE AVIATION COMMUNITY, AND THE CONGRESS.

AIR TRAFFIC CONTROL

CONTINUED NATIONAL PROSPERITY AND THE INCREASED DESIRE OF THE AMERICAN PEOPLE TO TRAVEL BY AIR HAVE RESULTED IN THE AIR TRAFFIC CONTROL SYSTEM HANDLING SAFELY AN UNPRECEDENTED NUMBER OF FLIGHTS THIS PAST YEAR. AIR TRAFFIC OPERATIONS AT THE 22 SELECT AIRPORTS AND 20 CONUS AIR ROUTE TRAFFIC CONTROL CENTERS INCREASED APPROXIMATELY FOUR PERCENT IN CALENDAR YEAR 1986. THE RATE OF GROWTH THIS YEAR IS AT LEAST AS STRONG AS IT WAS LAST YEAR.

DURING FISCAL YEAR 1986, THE NUMBER OF DAYS THAT THE AIR TRAFFIC CONTROL SYSTEM EXPERIENCED OVER 100,000 OPERATIONS INCREASED ALMOST 60 PERCENT FROM 103 TO 164. AN ALL TIME ONE-DAY HIGH OF 113,324 OPERATIONS WAS RECORDED ON NOVEMBER 6, 1986, AND 14 AIR TRAFFIC CONTROL FACILITIES EXPERIENCED RECORD HIGH OPERATIONS LEVELS IN FISCAL YEAR 1986.

DUE IN PART TO THESE INCREASES, DELAYS INCREASED BY 25 PERCENT LAST YEAR. OTHER MAJOR CONTRIBUTING FACTORS WERE SCHEDULE COMPRESSION DUE TO INCREASED AIRLINE COMPETITION, AND A MARKEDLY HIGHER AMOUNT OF UNFAVORABLE AVIATION WEATHER COMPARED TO THE PREVIOUS YEAR. AS AN EXAMPLE, SEVERE THUNDERSTORMS INCREASED BY ALMOST 35 PERCENT IN FISCAL YEAR 1986. I SHARE THE SUBCOMMITTEE'S CONCERN ABOUT THE LEVEL OF DELAYS THAT PASSENGERS HAVE EXPERIENCED, AND I CAN ASSURE YOU THAT THIS PROBLEM WILL CONTINUE TO RECEIVE OUR FULL ATTENTION.

WHILE TRAFFIC WAS INCREASING, OPERATIONAL ERRORS DECREASED BY 14 PERCENT SYSTEMWIDE BETWEEN 1985 AND 1986. OPERATIONAL ERRORS IN EN ROUTE CENTERS WHERE TRAFFIC SPACING IS MONITORED BY COMPUTERS DECREASED 18 PERCENT. THUS FAR, BASED ON PRELIMINARY INFORMATION, THE FIRST TWO QUARTERS OF FISCAL YEAR 1987 SHOW A 7

PERCENT INCREASE OVER FISCAL YEAR 1986. WE HAVE TAKEN AGGRESSIVE ACTIONS TO REVERSE THIS TREND.

IN FISCAL YEAR 1986, FAA EXCEEDED THE EMPLOYMENT GOAL OF 14,480 IN THE CONTROLLER WORK FORCE WITH 14,803 ON BOARD AT THE END OF FISCAL YEAR 1986. DURING FISCAL YEAR 1987, WE ARE INCREASING THE CONTROLLER WORK FORCE TO A MINIMUM OF 15,000 ON-BOARD BY THE END OF FISCAL YEAR 1987. IN FACT, WE ACHIEVED OUR FY 1987 GOAL AT THE END OF MARCH, SIX MONTHS AHEAD OF SCHEDULE, WITH A CONTROLLER WORK FORCE OF 15,089. THE APRIL CONTROLLER WORK FORCE IS AT 15,132. LAST WEEK, YOUR COMMITTEE SET A FISCAL YEAR 1987 WORK FORCE GOAL OF 15,225. FOR FISCAL YEAR 1988, WE ARE REQUESTING A MINIMUM CONTROLLER WORK FORCE OF 15,225 BY SEPTEMBER 30, 1988, TO MEET THE NEEDS OF THE SYSTEM. THIS INCLUDES THE AMOUNT CALLED FOR BY OUR STAFFING STANDARDS AND OVER 500 ADDITIONAL PERSONNEL FOR OUR TRAINING PIPELINE AND TO COVER UNSCHEDULED REQUIREMENTS. THE NUMBER OF FULL PERFORMANCE LEVEL (FPL) CONTROLLERS CONTINUES TO INCREASE. AT THE END OF MARCH 1987, THERE WERE 9,565 FPL'S REPRESENTING 70 PERCENT OF THE CONTROLLER WORK FORCE EXCLUDING AIR TRAFFIC ASSISTANTS (ATA'S). OUR GOAL FOR SEPTEMBER 30, 1988, IS 10,258 FPL CONTROLLERS. WE ARE CONTINUING TO STRENGTHEN THE NUMBERS AND SKILL LEVEL OF THE CONTROLLER WORK FORCE.

HUMAN RESOURCE MANAGEMENT

WE HAVE CONTINUED TO PLACE HIGH PRIORITY ON OUR HUMAN RESOURCES PROGRAM TO ADDRESS CONCERNS OF OUR EMPLOYEES. IN THE PAST YEAR -

- WE COMPLETED OUR SECOND EMPLOYEE ATTITUDE SURVEY. COMPARED TO THE 1984 SURVEY, THE RESULTS SHOW MODEST IMPROVEMENTS IN MANY AREAS, PARTICULARLY IN OVERALL EMPLOYEE JOB SATISFACTION AND IN OUR EMPLOYEES' REGARD FOR THEIR SUPERVISORS. THE SURVEY ALSO HIGHLIGHTED AREAS WHERE CONTINUING EFFORTS NEED TO BE MADE TO RESOLVE EMPLOYEE CONCERNS. THE SURVEY

  PROVIDES A CONSISTENT YARDSTICK BY WHICH WE CAN MEASURE AND HOLD OURSELVES ACCOUNTABLE FOR PROGRESS. I VIEW THE CONTINUED LONG-TERM USE OF PERIODIC EMPLOYEE SURVEYS AS AN ESSENTIAL PART OF OUR HUMAN RESOURCES PROGRAM.

- WE COMPLETED A SUCCESSFUL TEST OF IMPROVED WAYS TO IDENTIFY AND SELECT AIR TRAFFIC CONTROL SUPERVISORS. AMONG OTHER THINGS, PEER EMPLOYEES NOW HAVE THE OPPORTUNITY TO PROVIDE THEIR ASSESSMENT OF SUPERVISORY CANDIDATES. WE HOPE TO EXTEND THIS PROGRAM THROUGHOUT THE AIR TRAFFIC CONTROL OCCUPATION THIS YEAR AND BEGIN EVALUATION OF ITS USE FOR OTHER OCCUPATIONAL GROUPS.

- WE ESTABLISHED A PILOT PROGRAM TO EXTEND THE PHILOSOPHY OF PARTICIPATIVE MANAGEMENT TO THE UNIONIZED SECTOR OF OUR WORK FORCE. IN PARTNERSHIP WITH THE PROFESSIONAL AIRWAYS SYSTEMS SPECIALISTS AND WITH THE HELP OF OUTSIDE EXPERTS, WE BEGAN A COLLABORATIVE EFFORT AT A FEW WORK SITES IN OUR EASTERN REGION. WE HAVE BEEN PLEASED WITH THE RESULTS AND PLAN TO EXPAND THE PROGRAM TO ADDITIONAL SITES. WE HOPE THE PROGRAM WILL BECOME THE MODEL FOR LABOR/MANAGEMENT RELATIONSHIPS THROUGHOUT THE FAA.

- WE COMPLETED A COMPETITIVE SELECTION TO DEVELOP A MODERN MANAGEMENT TRAINING FACILITY--THE FIRST MAJOR UPGRADE SINCE 1971 WHEN THE PROGRAM WAS ESTABLISHED. OF EQUAL IMPORTANCE, WE HAVE COMPLETED A REVIEW OF SUPERVISORY TRAINING NEEDS BASED ON FUNCTIONAL AND COMPETENCY REQUIRE- MENTS IN ORDER TO RESTRUCTURE THE TRAINING COURSES TO MEET CURRENT NEEDS.

NATIONAL AIRSPACE SYSTEM PLAN

THIS PAST FISCAL YEAR WE SUBJECTED ALL OF THE NAS PLAN PROJECTS TO A CAREFUL REVIEW OF THEIR SCHEDULES AND COSTS. OUR LATEST TIMETABLES USE A MORE CONSERVATIVE ENGINEERING ESTIMATE OF EXPECTED SCHEDULE PERFORMANCE THAN WE HAD USED IN THE PAST.

WE CONTINUED TO PROGRESS IN ACCOMPLISHING OUR PROGRAMS UNDER THE NAS PLAN WITH $753 MILLION OF FACILITIES AND EQUIPMENT APPROPRIATIONS OBLIGATED, THAT IS, PLACED UNDER CONTRACT. WE PLAN TO OBLIGATE $1,097 MILLION IN FISCAL YEAR 1987, AND $1,152 MILLION IN FISCAL YEAR 1988. APPROXIMATELY 14 PERCENT OF THE NAS PLAN PROJECTS WILL BE COMPLETED BY THE END OF FISCAL YEAR 1987, WITH OVER 75 PERCENT OF ALL MAJOR NAS PLAN PROJECTS UNDER CONTRACT. WE ESTIMATE THAT BY THE END OF FISCAL YEAR 1987 APPROXIMATELY 90 PERCENT OF THE NAS PLAN PROGRAMS WILL BE UNDERWAY. SOME OF THE MORE SIGNIFICANT ACCOMPLISHMENTS IN FISCAL YEAR 1986 ARE AS FOLLOWS:

- CURRENTLY, 28 AUTOMATED FLIGHT STATIONS AND 12 FLIGHT SERVICE DATA PROCESSING SYSTEMS ARE OPERATING WITH UPGRADED MODEL 1 TECHNOLOGY. WE EXPECT THE LAST MODEL 1 SYSTEM TO BE COMMISSIONED BY THE END OF THIS FISCAL YEAR.

- A CONTRACT WAS AWARDED IN APRIL 1986 TO PROVIDE NEW BRIGHT RADAR INDICATOR TOWER EQUIPMENT (BRITE) TO REPLACE BRITE SYSTEMS WHICH HAVE BEEN INSTALLED SINCE 1967. THE NEW STATE-OF-THE-ART EQUIPMENT WILL ALSO PROVIDE ALPHANUMERIC DISPLAY SYSTEMS FOR SATELLITE AIRPORT TRAFFIC CONTROL TOWERS (ATCT) THAT PRESENTLY DO NOT HAVE RADAR.

- A CONTRACT MODIFICATION WAS AWARDED IN SEPTEMBER 1986 TO PURCHASE 13 ADDITIONAL AIRPORT SURFACE DETECTION EQUIPMENT (ASDE) RADARS WHICH WILL PROVIDE NEEDED SURVEILLANCE OF AIRCRAFT AND AIRPORT SERVICE VEHICLES.

- THE INTEGRATED COMMUNICATIONS SWITCHING SYSTEM (ICSS) PROVIDES VOICE COMMUNICATIONS SWITCHING SYSTEMS FOR REPLACEMENT OF OBSOLETE EQUIPMENT AND FOR NEW INSTALLATIONS IN ATCT'S, TRACON'S, AND FSS'S. A CONTRACT FOR ADDITIONAL SYSTEMS WAS AWARDED IN FISCAL YEAR 1986.

- CHANGES TO AIR TRAFFIC PROCEDURES FOR MICROWAVE LANDING SYSTEMS (MLS) WERE PUBLISHED, AND A FORMAL AIR TRAFFIC PROGRAM WAS ESTABLISHED TO ENSURE ADEQUATE PLANNING FOR MLS IMPLEMENTATION.

- A MAJOR REVISION WAS MADE IN THE FEDERAL AVIATION REGULATIONS (FAR) ON NON-FEDERAL MLS'S.

- A CONTRACT WAS AWARDED TO PROVIDE RECORDING EQUIPMENT FOR THE HAZARDOUS INFLIGHT WEATHER ADVISORY SERVICE (HIWAS).

- FAA BEGAN TAKING DELIVERIES OF DISTANCE MEASURING EQUIPMENT (DME) ANTENNAS AT THE RATE OF 20 PER MONTH AND WILL USE THEM TO ESTABLISH 45 NEW DME SITES AND UPGRADE MORE THAN 250 OTHERS.

- A $66 MILLION CONTRACT WAS AWARDED FOR RADIO CONTROL EQUIPMENT THAT WILL IMPROVE OPERATIONAL PERFORMANCE BY REPLACING THE PRESENT RADIO SIGNALING AND TONE CONTROL EQUIPMENT WITH SOLID-STATE SYSTEMS.

- AND MORE RECENTLY, THE FAA COMPLETED HARDWARE AND SOFTWARE TESTING OF THE HOST COMPUTER AT THE FAA TECHNICAL CENTER AND DELIVERED THE FIRST SIX HOST COMPUTERS TO THE SEATTLE, DENVER, HOUSTON, BOSTON, LEESBURG AND CHICAGO CENTERS. IN ADDITION, THE VOICE SWITCHING AND CONTROL SYSTEM DESIGN COMPETITION PHASE CONTRACTS WERE AWARDED IN OCTOBER 1986.

AVIATION SAFETY INSPECTION PROGRAM

THE FISCAL YEAR 1988 BUDGET REQUESTS AN ADDITIONAL 178 AVIATION SAFETY INSPECTOR AND 50 SUPPORT POSITIONS, BRINGING US TO A TOTAL OF 2,198 INSPECTORS, THE HIGHEST LEVEL WE HAVE EVER HAD. WE ARE CONTINUING WITH OUR EFFORTS TO ENHANCE AND IMPROVE THE AVIATION SAFETY INSPECTION PROGRAM THROUGH THE DEVELOPMENT OF A NATIONAL WORK PROGRAM, IMPROVED STAFFING STANDARDS AND NATIONAL PROGRAM GUIDELINES. WE HAVE AN ONGOING RECRUITING PROGRAM INTEGRATED WITH FAA'S IMPROVED TRAINING PROGRAM TO ENSURE THAT WE MAINTAIN AN ADEQUATE NUMBER OF INSPECTORS TO PERFORM THE REQUIRED INSPECTION, SURVEILLANCE, ENFORCEMENT, AND CERTIFICATION FUNCTIONS.

DURING FISCAL YEAR 1986, THE GENERAL AVIATION SAFETY AUDIT (GASA) WAS COMPLETED. FAA INSPECTORS CONDUCTED 6,859 INSPECTIONS OF OPERATORS, AIRMEN, AIR AGENCIES, AIRCRAFT, AND ON-DEMAND AIR TAXIS. IN ADDITION, THE AUDIT PRODUCED 27 SAFETY RECOMMENDATIONS, 26 OF WHICH HAVE BEEN IMPLEMENTED.

COMPREHENSIVE INSPECTIONS WERE CONDUCTED ON 18 MAJOR AIR CARRIERS AND 20 TURBINE ENGINE REPAIR STATIONS IN 1986 UNDER THE FAA'S NATIONAL INSPECTION PROGRAM. UNDER A TEAM CONCEPT, 311 INSPECTORS WERE COMMITTED TO THESE INSPECTIONS TO ASSURE COMPLETE EXAMINATION OF EACH CARRIER AND REPAIR STATION. WHILE THE TEAMS FOUND THAT OPERATORS, IN GENERAL, WERE CONDUCTING SAFE OPERATIONS, A NUMBER OF MAJOR CIVIL PENALTIES HAS RESULTED FROM THESE INSPECTIONS. THIS HAS HAD A BROAD AND POSITIVE IMPACT THROUGHOUT THE AVIATION INDUSTRY.

DURING FISCAL YEAR 1987, 145,745 INSPECTIONS OF ALL TYPES ARE PLANNED, INCLUDING 87,531 TOP PRIORITY INSPECTIONS OF THE NATION'S AIR CARRIERS AND AIR AGENCIES. THE PREPLANNED INSPECTIONS ARE IN ADDITION TO OTHER ACTIVITIES, SUCH AS ACCIDENT INVESTIGATION, AIRMAN CERTIFICATION, AND NEW-ENTRANT OPERATOR CERTIFICATION.

AIRCRAFT CERTIFICATION

DURING FISCAL YEAR 1986, THERE WERE 1,850 PRODUCTION APPROVAL HOLDERS AND THEIR SUPPLIERS UNDER FAA SURVEILLANCE. OUR AVIATION SAFETY INSPECTORS (MANUFACTURING) AND DESIGNEES ISSUED 6,318 ORIGINAL/AMENDED AIRWORTHINESS CERTIFICATES AND RELATED EXPORT APPROVALS. A TOTAL OF 2,258 FAA DESIGNEES WAS UNDER FAA SUPERVISION. A TOTAL OF 113 ENFORCEMENT ACTIONS WAS INITIATED WHICH WILL RESULT IN CIVIL PENALTIES OR ADMINISTRATIVE ACTION AGAINST FAA PRODUCTION APPROVAL HOLDERS.

IN FISCAL YEAR 1987, 528 QUALITY ASSURANCE AUDITS AT FAA PRODUCTION APPROVAL HOLDER FACILITIES ARE PLANNED. ADDITIONALLY, 5 INSPECTIONS OF FOREIGN MANUFACTURERS INVOLVED IN COPRODUCER AGREEMENTS ARE PLANNED. FOR FISCAL YEAR 1988, 553 QUALITY ASSURANCE AUDITS AND 5 FOREIGN INSPECTIONS ARE PLANNED.

IT IS ANTICIPATED THAT THERE WILL BE AN INCREASE IN THE AVIATION SAFETY INSPECTOR (MANUFACTURING) WORKLOAD, E.G., ACTIVITY IN MANUFACTURING FACILITIES, IMPORT AND EXPORT CERTIFICATION UNDER BILATERAL AIRWORTHINESS AGREEMENTS, EXTENSIVE SUPPORT TO AIRCRAFT MANUFACTURERS IN PROTOTYPE AIRCRAFT ACTIVITY; DEMAND ACTIVITY INVOLVING AIRWORTHINESS AND EXPORT CERTIFICATION AT OTHER THAN MANUFACTURERS; AND SUPERVISION OF DESIGNEES.

DURING FISCAL YEAR 1986, I APPROVED A MASTER PLAN FOR ENHANCING THE NATIONAL AIRCRAFT CERTIFICATION SAFETY REGULATORY PROGRAM. THIS PLAN PUTS SPECIAL FOCUS ON NATIONAL ORGANIZATIONAL DEVELOPMENT, MEETING FUTURE NEEDS, STANDARDIZATION, PROMOTING HUMAN RELATIONS AND ASSURING THE CONTINUED EFFECTIVENESS OF THE AIRCRAFT CERTIFICATION SAFETY REGULATORY PROGRAM. TWO SIGNIFICANT SUBPROGRAMS WERE INITIATED AT THE SAME TIME WITH EXPECTED COMPLETION TO BE IN FISCAL YEAR 1988. THEY ARE: 1. A MANAGEMENT ANALYSIS WITH THE GOALS OF DETERMINING THE MOST EFFICIENT AND EFFECTIVE MEANS OF OBTAINING COMPLIANCE WITH SAFETY OBLIGATIONS, AND 2. A JOB TASK ANALYSIS FOR THE PURPOSE OF ANALYZING THE SPECIFIC FUNCTIONS WITHIN CERTIFICATION. WITH THE INFORMATION GAINED FROM THESE TWO SUBPROGRAMS, WORK CAN BE CONTINUED IN SUCH AREAS AS TRAINING FOR OUR CERTIFICATION PROFESSIONALS, ANALYSIS OF THE FUTURE OF PRODUCTION CERTIFICATION, ANALYSIS OF FUTURE AIRCRAFT, AIRCRAFT PROPULSION AND ELECTRONICS DESIGN EVOLUTION, AND THE DEVELOPMENT OF THE GUIDANCE MATERIAL TO ASSURE THE CONTINUED HIGH LEVEL OF SAFETY THE AIRBORNE TRAVELING PUBLIC ENJOYS.

AVIATION SECURITY

DURING FISCAL YEAR 1986, THE FAA CONTINUED TO DEVELOP AND IMPLEMENT A COMPREHENSIVE AND DYNAMIC SECURITY PROGRAM DESIGNED TO PROVIDE EFFECTIVE RESPONSES TO MEET THE CHANGING TERRORIST THREAT TO CIVIL AVIATION.

THE INTERNATIONAL SECURITY AND DEVELOPMENT COOPERATION ACT OF 1985 REQUIRES INCREASED FOREIGN AIRPORT ASSESSMENT ACTIVITY AND

PROVIDES FOR MORE RIGOROUS SANCTIONS AGAINST AIRPORTS THAT FAIL TO MAINTAIN AND ADMINISTER EFFECTIVE SECURITY MEASURES. IN ACCORDANCE WITH THIS ACT, IN FY 1986, WE CONDUCTED 289 ASSESSMENTS AT 195 DIFFERENT FOREIGN AIRPORTS. WE WORKED WITH REPRESENTATIVES OF FOREIGN GOVERNMENTS AND THE U.S. DEPARTMENT OF STATE TO RESOLVE ANY IDENTIFIED SHORTCOMINGS. IN ONLY ONE INSTANCE, INVOLVING MANILA INTERNATIONAL AIRPORT, DID THE SECRETARY OF TRANSPORTATION FIND IT NECESSARY TO IMPOSE THE SANCTIONS CALLED FOR BY THE ACT. WORKING CLOSELY WITH THE DEPARTMENT OF STATE, FAA ASSISTED THE GOVERNMENT OF THE PHILIPPINES TO CORRECT THE DEFICIENCIES, AND THE SANCTIONS WERE LIFTED.

IN FY 1986, WE CONDUCTED 570 INSPECTIONS OF U.S. AIRPORTS. WE WORKED CLOSELY WITH DOMESTIC AIR CARRIERS AND AIRPORT AUTHORITIES TO RESOLVE SYSTEM DEFICIENCIES IDENTIFIED WITHIN THE UNITED STATES.

A NUMBER OF SIGNIFICANT ACTIONS HAVE BEEN TAKEN TO ENHANCE THE NUMBER AND SCOPE OF SECURITY PROCEDURES REQUIRED AT ALL AIRPORTS, WITH PARTICULAR EMPHASIS ON SIGNIFICANTLY MORE STRINGENT AND SOPHISTICATED MEASURES AT SELECTED INTERNATIONAL AIRPORTS. THE FAA PARTICIPATED WITH THE SECRETARY OF TRANSPORTATION'S SAFETY REVIEW TASK FORCE WHICH COMPLETED A COMPREHENSIVE REVIEW OF AVIATION SECURITY AT AIRPORTS THROUGHOUT THE UNITED STATES. THE FAA HAS DEVELOPED PLANS, IN COORDINATION WITH INDUSTRY AND FAA FIELD OFFICES, TO IMPLEMENT THE RECOMMENDATIONS.

FOR FY 1988, FAA IS REQUESTING AN INCREASE OF 87 POSITIONS IN AVIATION SECURITY. THESE POSITIONS ARE NEEDED TO ENABLE FAA TO CONDUCT THE REQUIRED FOREIGN AIRPORT ASSESSMENTS EFFECTIVELY AND TO PROVIDE ADEQUATE FEDERAL AIR MARSHAL COVERAGE OF FLIGHTS IN SENSITIVE AREAS OF THE WORLD.

AIRPORTS

DURING FISCAL YEAR 1986, FAA AWARDED CONTRACTS TO SUPPORT CAPACITY-RELATED ACTIVITIES SUCH AS THE DEVELOPMENT OF AIRPORT AND AIRSPACE COMPUTER SIMULATION MODELS IN SUPPORT OF CAPACITY ENHANCEMENT. ALSO, THE FIRST EDITION OF THE AIRPORT CAPACITY ENHANCEMENT (ACE) PLAN WAS PUBLISHED. THE ACE PLAN IS A COMPILATION OF FAA AIRPORT CAPACITY IMPROVEMENT PROGRAMS INCLUDING NEW AIRSPACE PROCEDURES, NAVAID AND SYSTEMS DEVELOPMENT, AND AIRPORT DEVELOPMENT.

AIRPORT CAPACITY TASK FORCES WERE INITIATED AT THREE LOCATIONS DURING FY 1986. THESE TASK FORCES COORDINATE THE EFFORT OF AIRPORT OPERATORS, USERS, LOCAL FAA REPRESENTATIVES, AND THE FAA TECHNICAL CENTER TOWARD DEVELOPING ACTION PLANS FOR SPECIFIC CAPACITY ENHANCEMENT OR DELAY REDUCTION MEASURES AT THE AIRPORT.

A LITTLE OVER TWO YEARS AGO, THE AIR TRANSPORT ASSOCIATION RECOMMENDED OVER 130 PROJECTS TO IMPROVE CAPACITY AT 22 HIGH ACTIVITY AIRPORTS. ABOUT 43 OF THESE WERE PROJECTS THAT COULD BE

ACCOMPLISHED UNDER THE AIRPORT IMPROVEMENT PROGRAM IF SPONSORS REQUEST THEM. SINCE THAT TIME, $139.5 MILLION HAS BEEN SPENT ON DEVELOPMENT OF NEW CAPACITY AT THESE AIRPORTS AND ANOTHER $261.7 MILLION WAS SPENT ON PROJECTS THAT PRESERVE THEIR EXISTING CAPACITY. OVER THE LIFETIME OF THE AIRPORT IMPROVEMENT PROGRAM, APPROXIMATELY 20 PERCENT OF GRANT FUNDS ARE SPENT FOR PROJECTS OF ALL TYPES AT THESE TOP 22 AIRPORTS.

AT THE END OF CALENDAR YEAR 1986, THE FAA COMPLETED ITS PROGRAM TO END OPERATION OF NON-NOISE COMPLIANT STAGE 1 4-ENGINE JETS AT U.S. AIRPORTS. THE REMAINING STAGE 1 AIRPLANES, ALL 2-ENGINE JETS, WILL END OPERATIONS AT U.S. AIRPORTS BY DECEMBER 31 OF THIS YEAR.

THE FAA ALSO MADE ABOUT 1,000 SAFETY INSPECTIONS OF AIRPORTS UNDER THE AIRPORT CERTIFICATION PROGRAM COVERED BY FEDERAL AVIATION REGULATION PART 13. AIRPORTS SERVED BY AIR CARRIERS OPERATING AIRCRAFT WITH MORE THAN 30 SEATS ARE INSPECTED, AT LEAST ANNUALLY, TO ASSURE COMPLIANCE WITH VARIOUS SAFETY-ORIENTED OPERATIONAL REQUIREMENTS.

AVIATION SAFETY

AVIATION ACCIDENT STATISTICS FOR FISCAL YEAR 1986 SHOW IMPROVEMENT IN AIR CARRIER, COMMUTER, AIR TAXI, AND GENERAL AVIATION CATEGORIES FOR TOTAL ACCIDENT RATES. ACCIDENTS FOR THE OVERALL SYSTEM DECREASED BY 8 PERCENT, AND FATAL ACCIDENTS DECREASED BY 5 PERCENT FROM FY 1985 TO FY 1986. THE FATAL ACCIDENT RATE FOR THIS PERIOD DECLINED FOR ALL OPERATOR CATEGORIES EXCEPT AIR TAXI. ACCIDENT AND FATAL ACCIDENT RATES, PER 100,000 FLIGHT HOURS, FOR ALL OPERATOR CATEGORIES WERE BELOW 1978 LEVELS, WHEN THE AIRLINE INDUSTRY WAS DEREGULATED. MORE IMPORTANT, THE RATES WERE CONSISTENT WITH THE OVERALL DECLINE EXPERIENCED SINCE 1978.

THE NAS PLAN AUDIT REPORT IDENTIFIED A NEED FOR A NAS SAFETY PROGRAM THAT WILL PROVIDE GUIDELINES AND DIRECTION TO INSURE THAT ALL SAFETY ASPECTS OF NAS PROGRAMS HAVE BEEN ADDRESSED. THE INITIAL RESEARCH AND DATA-GATHERING EFFORTS HAVE BEEN COMPLETED. A DRAFT SAFETY PROGRAM ORDER AND A DRAFT SYSTEM SAFETY STANDARD WERE INITIATED DURING FISCAL YEAR 1986 AND ARE EXPECTED TO BE COMPLETED IN FISCAL YEAR 1987.

A STUDY WAS CONDUCTED ON THE EFFECTIVENESS OF THE FAA TERMINAL CONTROL AREA (TCA) PROGRAM IN MEETING THE SEPARATION ASSURANCE NEEDS OF CURRENT AND FUTURE AVIATION TRAFFIC AT 23 HIGH ACTIVITY TERMINAL LOCATIONS. THE STUDY GENERATED MORE THAN 50 RECOMMENDATIONS ADDRESSING PILOT AND CONTROLLER EDUCATION, ENFORCEMENT OF THESE PROGRAMS, AND TCA CONCEPT AND DESIGN.

A BACK-TO-BASICS PROGRAM WAS REESTABLISHED TO REACQUAINT ALL SEGMENTS OF THE AVIATION INDUSTRY WITH THE SIMPLE AND BASIC OPERATIONAL PROCEDURES WHICH WERE TAUGHT TO PILOTS EARLY IN THEIR AVIATION CAREERS. THE PURPOSE IS TO INCREASE SAFETY THROUGH REDUCING ACCIDENTS AND INCIDENTS CAUSED BY INAPPROPRIATE DECISIONMAKING AND INADEQUATE ATTENTION TO BASIC SAFE FLYING TECHNIQUES.

IN ORDER TO ASSURE CONTINUED IMPROVEMENT IN AVIATION SAFETY, WE HAVE THE FOLLOWING PROGRAMS:

- ONGOING REVIEW OF STRUCTURAL INSPECTION DOCUMENTS FOR OLDER AIR CARRIER TRANSPORTS.
- CONTINUED ENGINEERING SUPPORT OF THE NATIONAL AVIATION SAFETY INSPECTION PROGRAM AS APPLIED TO AIR CARRIER AND REPAIR STATION AUDITS.
- DEVELOPMENT OF NEW STANDARDS NEEDED FOR THE CERTIFICATION OF STATE-OF-ART AIRCRAFT, SUCH AS FLY-BY-WIRE, TILT WING AND PROPFANS, THAT WILL BE FLYING WELL INTO THE NEXT CENTURY.
- CONTINUED EFFORT TO IMPROVE THE CABIN SAFETY OF TRANSPORT AND GENERAL AVIATION AIRCRAFT.
- IMPROVE THE SAFETY OF THE NAS BY GENERATING STANDARDS FOR COLLISION AVOIDANCE SYSTEMS, MLS, AND LORAN-C.

ON SEPTEMBER 15, 1986, I INFORMED FAA EMPLOYEES OF THE DETAILS OF THE LAST PIECE OF MY SUBSTANCE ABUSE POLICY INSTITUTED IN AUGUST 1985. I BELIEVE THIS FINAL PHASE, PERIODIC DRUG SCREENING FOR PERSONNEL IN SAFETY-RELATED POSITIONS, COMBINED WITH ESTABLISHED EDUCATION AND REHABILITATION ASPECTS OF THE POLICY, WILL HELP ENSURE THAT THE NATIONAL AIRSPACE SYSTEM IS FREE FROM DRUG ABUSE. THE DRUG SCREENING PROGRAM BECAME OPERATIONAL ON FEBRUARY 15, 1987. AS OF MAY 3 4,566 TESTS HAVE BEEN CONDUCTED. POSITIVE RESULTS HAVE BEEN IDENTIFIED FOR 5 JOB APPLICANTS AND 7 EMPLOYEES. THESE INDIVIDUALS HAVE EITHER ALREADY OR ARE ABOUT TO ENTER REHABILITATION PROGRAMS.

AVIATION FORECASTS

WITH CONTINUED GROWTH IN THE ECONOMY, AVIATION ACTIVITY IS EXPECTED TO CONTINUE THE UPTURN BEGUN DURING FISCAL YEAR 1983. THIS GROWTH WILL, OF COURSE, AFFECT FAA WORK AND RESOURCES. LET ME BRIEFLY HIGHLIGHT OUR ACTIVITY FORECASTS.

IN FISCAL YEAR 1988 WE PROJECT THE FOLLOWING INCREASES:

- INSTRUMENT FLIGHT RULES AIRCRAFT HANDLED BY THE EN ROUTE SYSTEM WILL INCREASE FROM 35.4 MILLION TO 36.6 MILLION, OR 3.4 PERCENT.
- INSTRUMENT OPERATIONS AT FAA TOWERS WILL INCREASE FROM 41.7 MILLION TO 43.0 MILLION, A 3.1 PERCENT RISE.
- AIRCRAFT OPERATIONS, LANDING AND TAKEOFFS, CONTROLLED BY FAA TOWERS WILL INCREASE 3.0 PERCENT FROM 60.5 MILLION TO 62.3 MILLION.
- FLIGHT SERVICES PROVIDED BY FLIGHT SERVICE STATIONS WILL DECREASE SLIGHTLY FROM 47.8 MILLION TO 47.6 MILLION.

- U.S. AIRCRAFT AND ENGINE MANUFACTURERS ARE ENTERING INTO MULTI-INTERNATIONAL CO-PRODUCER PROGRAMS WITH FOREIGN MANUFACTURERS. IT IS ESTIMATED THAT 8 MAJOR PROGRAMS WILL BE IN EFFECT, ENCOMPASSING 12 COUNTRIES, WHICH INCLUDE THE COMMUNIST AND FREE WORLD.
- AIRCRAFT AND COMPONENT MANUFACTURERS WHO HOLD FAA PRODUCTION APPROVALS, INCLUDING THEIR SUPPLIERS, WILL INCREASE 9 PERCENT FROM 1,850 TO 2,150.

AIRPORT AND AIRWAY TRUST FUND

THE ADMINISTRATION IS SEEKING A 2-YEAR (1988-1989) REAUTHORIZATION OF FAA PROGRAMS FUNDED FROM THE AIRPORT AND AIRWAY TRUST FUND TO CONTINUE THE MODERNIZATION OF THE AIR TRAFFIC CONTROL SYSTEM AND TO ADDRESS CRITICAL CAPACITY, SAFETY, AND SECURITY ISSUES AT AIRPORTS. AS AN INTEGRAL PART OF THIS REAUTHORIZATION PROPOSAL, WE PROPOSE TO FUND 85 PERCENT OF ALL FAA COSTS FROM THE USER-SUPPORTED TRUST FUND TO ENSURE THAT USERS PAY THEIR SHARE OF THE PROGRAM COSTS. OUR BILL CONTINUES USER FEES AT THEIR CURRENT LEVEL. ALSO, WE PROPOSE TO ELIMINATE THE PENALTY PROVISIONS THAT WERE BUILT INTO THE AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982. THE NET EFFECT OF THE PENALTY PROVISIONS AND FAA PROGRAMS BEING FUNDED BELOW THEIR FULL AUTHORIZED AMOUNTS IS THAT CIVIL AVIATION USERS HAVE SUPPORTED ONLY ABOUT 57 PERCENT OF THE COST OF THE SYSTEM SINCE 1982. THE GENERAL TAXPAYER HAS PROVIDED A $7.5 BILLION SUBSIDY FOR CIVIL AVIATION'S SHARE OF FAA'S COSTS OVER THE PAST 6 YEARS. OUR REAUTHORIZATION PROPOSAL WILL END THAT UNFAIR BURDEN.

AT THE END OF FISCAL YEAR 1987, WE ESTIMATE A CASH BALANCE IN THE TRUST FUND OF NEARLY $10.0 BILLION, OF WHICH $4.4 BILLION IS COMMITTED LEAVING AN UNCOMMITTED BALANCE OF $5.6 BILLION. REVENUE IS ESTIMATED AT $4.2 BILLION IN FISCAL YEAR 1988. OUR PROPOSED TRUST FUND LEVELS IN FISCAL YEAR 1988 WILL REDUCE THE PROJECTED UNCOMMITTED TRUST FUND BALANCE TO $4.9 BILLION BY THE END OF FISCAL YEAR 1988.

FISCAL YEAR 1987 OPERATIONS LEVELS

THE CONGRESS PROVIDED $2,783 MILLION FOR FISCAL YEAR 1987 OPERATIONS COSTS. SUPPLEMENTALS ARE REQUESTED IN FISCAL YEAR 1987 IN THE AMOUNT OF $50.0 MILLION FOR ADDITIONAL PROGRAM REQUIREMENTS AND $92.3 MILLION ASSOCIATED WITH THE PAY RAISE AND THE NEW FEDERAL EMPLOYEES' RETIREMENT SYSTEM.

THE MAJOR ITEMS INCLUDED IN THE PROGRAM SUPPLEMENTAL ARE $20.5 MILLION FOR INCREASED LEASED TELECOMMUNICATION COSTS DUE TO THE ADDITION OF UNANTICIPATED SAFETY CRITICAL SERVICE AND TARIFF INCREASES, $14.1 MILLION TO CONTINUE A TRAINING CONTRACT FOR AIR ROUTE TRAFFIC CONTROL INSTRUCTORS, AND $8.6 MILLION FOR PERMANENT CHANGE-OF-STATION MOVES TO STAFF NEW AUTOMATED FLIGHT SERVICE STATION FACILITIES.

FISCAL YEAR 1988 APPROPRIATIONS REQUEST

FAA'S TOTAL FISCAL YEAR 1988 BUDGET ESTIMATE REQUESTS $5,803 MILLION AND 47,363 DIRECT, FULL-TIME PERMANENT POSITIONS. THIS REPRESENTS AN INCREASE OF $963 MILLION OVER THE FISCAL YEAR 1987 LEVEL, A LEVEL WHICH INCLUDES $48 MILLION FOR THE FEDERAL EMPLOYEES' RETIREMENT SYSTEM, AND $44 MILLION FOR THE JANUARY PAY RAISE. THE POSITION REQUEST REFLECTS A NET DECREASE OF 939 POSITIONS FROM THE FISCAL YEAR 1987 LEVEL. THIS DECREASE IS MADE UP OF A NET 222 POSITION DECREASE IN THE OPERATIONS APPROPRIATION, A 720 POSITION DECREASE IN THE OPERATION AND MAINTENANCE APPROPRIATION DUE TO THE TRANSFER OF METROPOLITAN WASHINGTON AIRPORTS TO A LOCAL AUTHORITY, OFFSET BY A THREE POSITION INCREASE IN THE HEADQUARTERS ADMINISTRATION APPROPRIATION.

THIS REQUEST MOVES US FORWARD TOWARD REACHING OUR GOALS OF IMPROVING SAFETY AND SECURITY, EXTENDING SERVICES, INCREASING CAPACITY, AND REDUCING DELAYS. WITH THIS GENERAL BACKGROUND, I WILL COMMENT ON EACH OF OUR 1988 ESTIMATES BY APPROPRIATION.

OPERATIONS APPROPRIATION

THE REQUEST FOR $3,248 MILLION AND 45,044 DIRECT POSITIONS, OF WHICH $2,416 MILLION IS FINANCED FROM THE TRUST FUND, REFLECTS AN INCREASE OF $371 MILLION OVER THE FISCAL YEAR 1987 LEVEL AND A NET POSITION REDUCTION OF 222.

MUCH OF THIS FUNDING INCREASE IS REQUIRED FOR THE NONDISCRETIONARY FISCAL YEAR 1988 COSTS ASSOCIATED WITH THE JANUARY 1987 PAY RAISE AND THE NEW FEDERAL EMPLOYEES' RETIREMENT SYSTEM (FERS). THE REQUEST ALSO PROVIDES FOR A MINIMUM CONTROLLER WORK FORCE OF 15,225 ONBOARD BY SEPTEMBER 30, 1988; AND AN INCREASE OF 178 AVIATION SAFETY INSPECTOR AND 50 SUPPORT STAFF POSITIONS, WHICH ARE NECESSARY TO ADDRESS THE REQUIREMENTS OF NEW OPERATORS AND SHIFTING MAINTENANCE ARRANGEMENTS STIMULATED BY DOMESTIC AIRLINE DEREGULATION. AN INCREASE OF OVER $20 MILLION IS REQUIRED TO TRAIN THE NEW CONTROLLERS AND INSPECTORS. FURTHER EMPHASIS IS PLACED ON STRENGTHENING CIVIL AVIATION SECURITY THROUGH AN INCREASE OF 87 ADDITIONAL SECURITY SPECIALIST POSITIONS. THE TOTAL POSITION INCREASE OF 278 IS OFFSET BY A REDUCTION OF 500 POSITIONS TO BE ACHIEVED THROUGH MANAGEMENT INITIATIVES. A $53 MILLION INCREASE IN LEASED TELECOMMUNICATIONS IS NEEDED TO FUND INCREASED TARIFFS AND EXPANSION AND MODERNIZATION OF THE LEASED LINES NECESSARY TO TRANSMIT MESSAGES PERTAINING TO THE FLOW AND CONTROL OF AIR TRAFFIC.

HEADQUARTERS ADMINISTRATION

THE REQUEST FOR $38.1 MILLION WILL SUPPORT THE CENTRALIZED MANAGEMENT FUNCTIONS AT OUR WASHINGTON HEADQUARTERS LOCATION AS WE HANDLE AN INCREASING NUMBER OF ENFORCEMENT ACTIONS AND AN INCREASING NUMBER OF TRANSACTIONS ASSOCIATED WITH IMPLEMENTATION OF THE NAS PLAN.

GRANTS-IN-AID FOR AIRPORTS
(AIRPORT AND AIRWAY TRUST FUND)

THIS BUDGET PROPOSES CONTRACT AUTHORITY OF $1,017.0 MILLION AND AN OBLIGATIONAL LEVEL OF $1,017.0 MILLION FOR AIRPORT PLANNING AND DEVELOPMENT. OUR REQUEST WILL ALSO ALLOW US TO TARGET MORE FUNDS TOWARD AIRPORT CAPACITY AND WILL PROVIDE FOR AN EXPANDED STATE ROLE IN AIRPORT GRANT ADMINISTRATION. WE REQUEST A LIQUIDATING CASH APPROPRIATION OF $950 MILLION TO PAY OBLIGATIONS FROM PRIOR YEARS, AS WELL AS FOR THOSE EXPECTED TO COME DUE FROM FISCAL YEAR 1988 OBLIGATIONS.

FACILITIES AND EQUIPMENT
(AIRPORT AND AIRWAY TRUST FUND)

OUR REQUEST FOR THE FACILITIES AND EQUIPMENT APPROPRIATION IS $1,350 MILLION, $545 MILLION MORE THAN OUR FISCAL YEAR 1987 APPROPRIATION. FISCAL YEAR 1988 BEGINS THE SECOND HALF OF THE PLANNED 10-YEAR PROGRAM TO BUILD A MODERN AIR TRAFFIC CONTROL SYSTEM. INITIAL WORK IS ALSO PROPOSED TO OVERHAUL OUR NETWORK OF MANAGEMENT AND SAFETY SUPPORT COMPUTERS THROUGHOUT THE AGENCY.

THIS REQUEST REPLACES OBSOLESCENT, LABOR INTENSIVE FACILITIES WITH EQUIPMENT CAPABLE OF HANDLING TRAFFIC PREDICTED FOR THE 1990'S. THE FISCAL YEAR 1988 REQUEST, COMBINED WITH ANTICIPATED SPENDING OF PRIOR YEAR, IS NEEDED SINCE THE MORE INTENSIVE PROCUREMENT AND INSTALLATION PHASE OF THE NAS PLAN IS NOW REPLACING THE DEVELOPMENT AND PRELIMINARY ENGINEERING PHASE. THIS LEVEL OF FUNDING WILL ENSURE THAT THE NAS PLAN REMAINS ON TRACK.

WE PLAN TO OBLIGATE, THAT IS PLACE UNDER CONTRACT, $1,097 MILLION IN FISCAL YEAR 1987. WE EXPECT TO OBLIGATE $1,152 MILLION IN FISCAL YEAR 1988.

MAJOR NEW AND CONTINUING SYSTEMS OR EQUIPMENT REPLACEMENT PROGRAMS PROPOSED FOR FUNDING INCLUDE:

- RADAR MICROWAVE LINK SYSTEM ($61M)
- CONTINUED DESIGN AND INITIAL PRODUCTION CONTRACT FOR ADVANCED AUTOMATION SYSTEM ($180M)
- RADIO CONTROL EQUIPMENT ($71M)
- ESTABLISH/REPLACE AIRPORT SURVEILLANCE RADAR ($59M)
- REPLACE/MODERNIZE TERMINAL AIR TRAFFIC CONTROL FACILITIES ($71M)
- TERMINAL DOPPLER WEATHER RADAR ($130M)
- FLIGHT SERVICE STATION MODERNIZATION ($68M)
- ESTABLISH MICROWAVE LANDING SYSTEM ($49M)
- SYSTEMS ENGINEERING AND INTEGRATION ($103M)
- EXPLOSIVE DETECTION ACQUISITION ($9M)

RESEARCH, ENGINEERING AND DEVELOPMENT (AIRPORT AND AIRWAY TRUST FUND)

ONE OF MY HIGH PRIORITIES IS TO MAKE SURE THAT THE FAA HAS A SOUND RESEARCH, ENGINEERING AND DEVELOPMENT (R,E&D) PROGRAM. IT IS THE FOUNDATION THAT WILL LET US MOVE INTO THE 1990'S AND THE NEXT CENTURY WITH A FIRM GRASP OF NEW TECHNOLOGY CHOICES FOR AVIATION SAFETY AND AIR TRAFFIC CONTROL. WE ARE REQUESTING $150.0 MILLION FOR FAA'S RESEARCH, ENGINEERING AND DEVELOPMENT ACTIVITIES. THESE PROGRAMS INCLUDE THE VOICE SWITCHING AND CONTROL SYSTEM, CENTRAL WEATHER PROCESSOR, AND AIRCRAFT SAFETY WHICH INCLUDES AVIATION SECURITY. THE AVIATION SECURITY WORK INCLUDES ADVANCED TECHNOLOGIES BEING EXPLORED FOR THE DETECTION OF WEAPONS, EXPLOSIVES, AND FLAMMABLE LIQUIDS.

OPERATIONAL TESTING OF THE TRAFFIC ALERT AND COLLISION AVOIDANCE SYSTEM (TCAS) IS WELL UNDERWAY. THE FIRST AIRLINE OPERATIONAL USE OF TCAS II TOOK PLACE ABOARD A PIEDMONT AIRCRAFT ON MARCH 8TH. UNITED AIRLINES IS SCHEDULED FOR THEIR FIRST TCAS USE IN JUNE, AND NORTHWEST ORIENT IN OCTOBER OF THIS YEAR. DEVELOPMENT OF THE MORE ADVANCED TCAS III, HAVING BOTH HORIZONTAL AND VERTICAL GUIDANCE CAPABILITIES, IS CONTINUING.

ADDITIONAL FISCAL YEAR 1988 WORK INCLUDES EFFORTS TO IMPROVE THE ACQUISITION, DISTRIBUTION, AND DISPLAY OF WEATHER INFORMATION TAILORED TO THE NEEDS OF AVIATION USERS. THE FISCAL YEAR 1988 PROGRAM ALSO PROVIDES ADVANCED RESEARCH FOR THE AIRWAY SYSTEM OF THE NEXT CENTURY.

METROPOLITAN WASHINGTON AIRPORTS

NO RESOURCES ARE REQUESTED IN FISCAL YEAR 1988 FOR THE CONSTRUCTION, AND OPERATION AND MAINTENANCE APPROPRIATIONS DUE TO THE TRANSFER OF THE METROPOLITAN WASHINGTON AIRPORTS TO AN INDEPENDENT AIRPORT AUTHORITY IN FISCAL YEAR 1987.

THIS CONCLUDES MY STATEMENT, MR. CHAIRMAN. MY STAFF AND I ARE NOW PREPARED TO ANSWER QUESTIONS.

OPENING INTRODUCTIONS

Admiral ENGEN. I have at the table on my far right Mr. Broderick, Associate Administrator for Aviation Standards; Mr. Weithoner, Associate Administrator for Human Resources; Mr. Potts, Associate Administrator for Air Traffic; Mr. Stoer, who is the budget person; and Mr. Harris, Associate Administrator for Development and Logistics.

Senator LAUTENBERG. Thank you very much, Admiral Engen. Before we get into some of the issues in the budget request I see sitting across from me someone who is totally devoted to his duty and responsibility. Again, I commend you for that. I think you are in the unenviable position of having to serve two masters. One, of course, is the safe and reliable air service that we have to give the American public. The other, of course, is OMB and its budgetary constraints.

I have to tell you that I find somewhat distressing this constant debate about whether or not we have enough people doing the job, what their skill levels are and the challenge as we heard it offered by GAO.

Do you argue with their techniques, their process in any way, Admiral Engen?

Admiral ENGEN. I do not argue with their techniques. We may discuss the process because they view the system differently than that person who is totally responsible to the Congress for safety in the system. Once we have had a chance to address the issues and the numbers that they come up with, I think that we come to a general agreement.

Let me say, sir, you mentioned in opening that I have two masters. I guess many of us have many different masters. I want to assure you, sir, that this agency is totally dedicated to improving safety first, and then we do other things later on.

SENATE PRESENTATION

Senator LAUTENBERG. I am sure that is the picture as you see it. Frankly, I would have to tell you in all due respect, Admiral, that it does not come across that way. I know you are concerned with safety and I do not in any way mean to impugn your motives, or your direction. What we are debating is whether or not we have employed the resources necessary to make this system as safe as it can so that anyone of us, any members of our family, our friends, our staff, et cetera get into an airplane, I would like to be able to say to them that I feel as good today about the system as I did at any time.

I am going to confess to you. I do not. I do not because I see the incredible delays that occur. I see what I think is a system somewhat out of control on a national basis. Yes we are crowding the skies, and yes we are crowding the departure and arrival times, the peak times.

I think that you and I know that we will share this, certainly verbally, certainly idealogically, want to assure that at all times we have done whatever we can to make that system as safe as we possibly can.

The problem that I see are reflected in some of these charts that we have up here. This argument about numbers, honestly, Admiral, is one of my principal frustrations, because I think a number is a number is a number, and we cannot seem to agree on that.

The other thing is the question of morale and whether or not people are feeling good about themselves, feeling good enough about themselves to do the job properly, good enough about themselves to have a clear head when they get up there. We also fight about that.

If you look at this chart, here we have a chart, a full-performance-level controller staffing, FPL. The critical designation in the management of the system and its reliability. Is that fair? FPL, that is the top banana to use the expression, top person in the tower in terms of their ability to control, to understand all of the activities?

FULL-PERFORMANCE-LEVEL CONTROLLERS

Admiral ENGEN. That is the person responsible to the supervisor and the manager who has the total responsibility, yes sir.

Senator LAUTENBERG. As much as possible, we like to have FPL's filling every open billet. Is that fair to say? Here we have them going from calendar year 1981. This is the year of the strike. We have on the left here the traffic count, millions of movements, and on the right side we have the FPL staffing. What we see is this gap, the shortfall, between the staffing level and the number of movements that take place. Though there is some slight gain on it, it is very little.

Are we wrong about the numbers? Are we wrong about the requirements? Are we wrong about our interpretation, Admiral? Here we see it. It is very clearly laid out, September 1981 to September 1986. When we are at the bottom of our staffing we had roughly 3,000 FPL's. Here we have seen this increase in traffic. We have picked up several million movements in that 5-year period, and the staffing at the FPL level is woefully, I think, short of the requirement that we have. What do you say?

Admiral ENGEN. Mr. Chairman, I am not familiar with where you got those figures. In my count, I use 9,565 as the FPL. I do not know what the red line is down there. Did you address that?

Senator LAUTENBERG. It is the staffing level, and it refers to the index on the right side.

Admiral ENGEN. That is really at 74 facilities rather than the entire system.

Senator LAUTENBERG. Right. These are the major facilities. One of the arguments we have gotten into and something I have heard from a member of your staff, I believe, who issued the first public response to the GAO report is that that may be at 43 of them. We looked at the TRACON's and the towers, and there may be the shortage there, but overall we are doing pretty good. I interpret that to mean that in the busiest places we are short. But in the less busy places things are pretty good.

Admiral ENGEN. Let me say I do not want to argue with you about numbers because we are all trying our very level best to increase those numbers. Yes; they are not as high as I want them, and, no, we have not made the progress that we have wanted to make.

Let me say that the air traffic control system was created under pressure many years ago. It has grown because of that pressure. There has never been a year in which the air traffic control system was not under some kind of pressure. It is a system that must continue to work all of the time. Taken in a Defense Department analogy, which in my previous past I can relate to, we, the FAA, are constantly at war. We can never ever shut down the system. We cannot prepare in peacetime, if you will, for something that would occur in wartime.

Whenever we improve the situation, trying to increase the number of FPL's, we must do so while we continue to operate the system safely. For that reason, in my considered opinion, the recovery has been less dynamic than I would like it to be.

Is it unsafe? No, sir; let me assure you that at every position in the——

GENERAL AIR SAFETY

Senator LAUTENBERG. Is it less safe?

Admiral ENGEN. No.

Senator LAUTENBERG. It is more safe?

Admiral ENGEN. By definition it certainly has been more safe last year than it has been in years previous.

Senator LAUTENBERG. More safe than it was before 1981?

Admiral ENGEN. Yes, sir; without a doubt.

Senator LAUTENBERG. That was at our peak staffing level, and you are saying with today's reduced staff but with increased traffic, the system is safer today than it was then?

Admiral ENGEN. Basically speaking that is true. Let me put a caveat on that because you are going to box me into a corner. I want to assure you the system is not all perfect, and there are a lot of problems out there. We are talking about them here. I do not want you to characterize me as saying that the system is perfect. It is not. We have much remaining to be done. There will be next year, and the year after that, and the year after that.

My point, sir, is that we are moving in that direction. Let me wrap up my thought by saying there is not a position in the air traffic system out there in the United States at which does not stand a fully qualified controller. And I will stand behind that.

Senator LAUTENBERG. Do you want to say that again?

Admiral ENGEN. There is not a position that we permit to operate in the air traffic system out there which is not manned by a fully qualified person to do that particular job. We do not allow people to perform in these jobs when they are not qualified to do so.

Senator LAUTENBERG. In all due respect, I hear you making a blanket statement that there is no position out there that has less than a fully qualified professional person according to an ideal.

CONTROLLER SHORTAGES

Admiral ENGEN. According to a standard. And I must admit that we do train them on the job. There will be a developmental controller who is backed up by a fully qualified supervisor watching his or her every move.

The difference, Mr. Chairman, is in the overtime. That drives employee attitudes and additional problems. And I want to say right up front that we are continuing to drive our people too hard, and that is a result of not having sufficient number of FPL's.

Senator LAUTENBERG. Well, we managed to arrive at an agreement on that, Admiral.

Senator D'AMATO. Mr. Chairman, I wonder if we could get the Admiral to repeat that last statement about driving people too hard? I did not quite get that.

Admiral ENGEN. My vernacular, my aviation background. Driving too hard. We have overtime in the system. Does that mean the system is unsafe? No, sir; it does not. Does that mean we over drive some people in some positions? Yes; it does.

And since I have been Administrator, for the last 3 years, this has been a continuing problem at which we have been whittling away. Fortunately, in 1986 our overtime levels were down drastically. In 1986, aside from some key en route facilities and some level five terminals, we had a handle on our overtime.

Senator LAUTENBERG. We all know that there is still a shortage of staffing at the level we would like to see. Is that shortage, Admiral, at the most skilled level larger than the shortage at the lower skill level?

Admiral ENGEN. I believe that is a fair statement, yes, sir.

Senator LAUTENBERG. The report that we all have from GAO makes particular mention of the fact. It makes several references: increase in traffic, 58 percent, Newark, New York, 44 percent since 1981; Chicago, 50 percent, Baltimore-Washington, et cetera.

Then we look at what has happened as a result of these increased traffic levels. There is obviously a larger workload, and we see on the next chart here some of the traffic increases.

Is there any challenge to those?

Admiral ENGEN. Where were those figures coming from, Mr. Chairman? Is this from the GAO report that was given to you yesterday?

Senator LAUTENBERG. Yes.

Admiral ENGEN. I just got it last night. I have scanned it. We have not had a chance to work with the GAO.

Senator LAUTENBERG. Someone in your staff certainly knows whether or not these things are reasonably accurate. I mean, is there anybody who would say Newark has less traffic than it had in 1981?

I was on the port authority at the time, so I can tell you it has more now. How much more? I mean, significantly more traffic. We see those figures published every year. Newark brags about it.

Admiral ENGEN. We can talk about orders of magnitude. I can accept that as orders of magnitude.

If you do me the courtesy, sir, of having the chance to comment to the GAO upon their figures.

Senator LAUTENBERG. That you are free to do, of course, apart from this hearing. I would expect you to do it. And if you report publicly, I would not even be surprised.

We looked at the increase in traffic at 43 of the busiest or most important facilities. What we see is the FPL population presently, what GAO is saying exists there. For instance, in the Washington en route center—this is good for all the Congressmen and Senators and all the business people and families who travel between New York and Washington to see—we are down a couple there.

We get up to the New York TRACON, which handles the traffic coming in, we are off eight people there.

This is from your own report of the staffing level. Newark is down four from what GAO says there. It is a significant percentage. Forty-three facilities show an authorization for 6,311 full-performance-level controllers. We have on board 3,800.

That is a difference of 2,500, roughly 40 percent, that we have not filled to date. We have eligible for retirement 259, and that to me looks like there is a drastic shortage of FPL's. Those are the ones who we count most on, at least at the working level, to do the job.

Is that something you would argue with?

Admiral ENGEN. I would not argue with the numbers, for this simple reason. You are talking enough in generalities that I would not nitpick the small numbers.

Let me say this. We do not cook the numbers. I will not allow anybody to put out numbers in order to meet some standard. Safety has got to be No. 1. We are in the business of air traffic control.

And the retirements that you referred to, they have been about par for the course, although in 1987 probably those eligible to retire are probably a little lower than they have been in 1986 and 1985.

We have been able to forecast quite successfully the number of people that would retire. I do not think the retirements will all come to pass. Many of them will, but not in the numbers that are eligible.

SUPERVISORS CONTROLLING AIR TRAFFIC

Senator LAUTENBERG. There is a lot of pressure associated with the air traffic control job and we are determined to find out more about this. We are going to be talking to people who do the job. You said it yourself, couched in nicer terms. I think these people are sitting in a pressure cooker. They are driven hard. I think they are loyal, dedicated people who give more than we have a right to expect.

And when they are extended like that, in my view it increases very distinctly the possibility of error. We have supervisors doing hands-on work in the management of traffic. We have information that says in the Kansas City en route center 60 percent of the time of the supervisor is dedicated to controlling traffic.

Admiral, you and I come out of management, you in one area and me in another. I can tell you this: If I had people that are supposed to manage and they are doing the job, we are not running the ship, to use popular terminology.

Here is the chart that talks about that. Kansas City, Los Angeles, 60 percent of the time the supervisors are involved in controlling air traffic.

Admiral Engen, you said something about cooking numbers. I do take exception to the way the reference was presented, because it suggested to me that numbers are meaningless. I would have to tell you that I come out of the computer business, and when I talk about numbers of people—if you want to talk about numbers of pilots in an airplane, you talk about numbers of firemen, number of soldiers, and so forth—I think it has great significance in terms of how we function.

Admiral ENGEN. It does indeed, sir. And please do not read my reference to cooking numbers to anything more than we will not prevaricate, we will not tell something that is not there. We must deal in the numbers that we understand are factual.

I will not permit and I have not found—or where I have found it I have corrected it—anybody who will slant numbers. It is just not in our lexicon. I was speaking about ourselves, not anybody else. I was speaking about the FAA.

Senator LAUTENBERG. Numbers of employees fully trained make a heck of a difference in the way the system is likely to be managed.

What about this? GAO is saying this, and I asked initially whether or not you disagreed with them. You certainly would not disagree, I assume, even if you said that one might be 50 percent. Should supervisors be handling the switch out there?

Admiral ENGEN. You are trying to get me to buy off on something. I will give you the general thrust of what you say, sir. But you are trying to get me to buy off on specifics which I have not had a chance to really look at.

Senator LAUTENBERG. Honestly, I am not. But what I am trying to get to understand is whether or not your assurances, the agency's assurances, ought to permit us to sit back complacently and say: Aha, we have done our job for the public.

I do not believe that is the case, and the numbers to me are simply a way of making the arguments. The numbers do tell me something. They tell me that this agency is managed less perfectly, less safely, than it ought to be. Now, if we want to argue the numbers you can say to me: No, these things do not really matter; I do not care whether supervisors man the stick or not.

That may be the case. Maybe there is something different about managing the FAA than there is about managing agencies, corporations, or otherwise. If supervisors are not doing the supervisory job, then we are removing some of the backup, some of the redundancy that is essential in a firefighting kind of assignment.

Admiral ENGEN. Where that occurs, Mr. Chairman, I agree with you conceptually. I absolutely do. A supervisor should be a supervisor, and we keep this to an absolute minimum.

Senator D'AMATO. Admiral, I have listened now for about a half an hour. This chart, which is a compilation of facts and statistics brought forth by the General Accounting Office, in and of itself is a rather damning factual presentation of what is taking place in most, if not all, of America's heavily utilized traffic centers.

From the west coast to New York, Boston, Chicago, you have supervisors who are actually doing the air traffic controlling from a minimum of 20 percent to a maximum of 60 percent of the time. And that is what the chairman is saying.

Now, in your own manuals you require as a matter of policy that the traffic management coordinators and first line supervisors spend at least 10 percent of their time working air traffic in order to retain the full appreciation of the controller's environment.

I suggest that maybe you would want us to put in some language that would suggest under no circumstances should they work more than, let us say, 25 percent. Now, that would be rather dangerous, because you might have an occasion where you would need, due to sickness or illness, et cetera, a short-term, interim utilization of a full-time management person.

Let me suggest to you, while no one expects you to respond to the GAO report with particularity, I think one has to come forward and say that these are manifestations of the absolutely overworked, understaffed work force in these towers.

Now, you yourself said, and I am trying to get from you, that we have trouble getting the sufficient FPL's, which is the full-performance-level controllers. It always strikes me, you have these FPL's—you are supposed to be familiar with the jargon—and you say, because we drive them.

Well, let me suggest that it is not only that. I am wondering how many people you graduate a year from this institute, from the academy. I am wondering—and you have never given us a breakdown as it relates to the attrition rate.

So when you come and say, well, we graduated 500, 600, if you have an attrition rate of about 500 or 600, you are making little, if any, progress.

But going back—and I will yield back to the chairman graciously, as he has allowed me to attempt to bring a little clarity. These figures are absolutely unacceptable. They are unacceptable.

You should not have a traffic management coordinator and first line supervisor spending more of their time in that tower as a matter of necessity. Thank God they are there to do it, but it then says that you are not getting adequate oversight of the other controllers in that tower.

Admiral ENGEN. May I respond?

Senator D'AMATO. Academy attrition rate, 40 percent.

Senator LAUTENBERG. Please do.

Admiral ENGEN. You cast us in the wrong role, in the sense that it sounds like I am trying to say everything is OK. It is not, and I am here to stand up for our air traffic controllers, who are the finest air traffic controllers in the world.

Senator D'AMATO. Admiral, let me stop you right there, because there has never been an inference from the chairman or this Senator that there is something wrong with our controllers. But there has been every inference, I believe—and I speak for the chairman also on this point—that there are not sufficient controllers, that the resources necessary to see to it that there is the best safety system we can possibly have have not been devoted to this task.

Admiral ENGEN. I agree that we need more air traffic controllers. That is where we are going and that is why I requested that in my budget, sir.

May I say, those are five of our most critically staffed facilities. At the others that were polled by the GAO, if I can quickly take some summaries here, we are down to around 10 percent of the time these supervisors were being used. Those are the five en route centers where we do have our most overtime problems.

You have pinned it down. Those are the areas in which we are specically working—Chicago——

PLAN TO INCREASE AIR TRAFFIC CONTROLLERS

Senator D'AMATO. Do you have a particular battle plan? How long will that plan of implementation take to address this problem so that where you have management people they will not have to be of necessity regularly pressured into air traffic controller duty?

Admiral ENGEN. We do. In fact, Chicago is coming down rapidly, because that battle plan is in force. We have a battle plan for two other facilities as well and in order to improve our training at the Oklahoma City academy and the environment that the people will find at their respective terminal or center. This is the battle plan that we have.

Senator LAUTENBERG. If you have a plan, would you submit that. Do you have it available? Do you have it handy? Is it something you want to read from right now and tell us when this staffing requirement will be met?

Admiral ENGEN. I can provide it for the record. I deal in it daily, sir.

And incidentally, part of the money that we want to use for this training could be taken up by the need to finance additional controllers from that radar training facility. I hope that does not take place.

[The information follows:]

We have placed academy graduates in our critically staffed facilities in large numbers so that our developmental pipeline of GS-9 and GS-11 controllers is now very sizable. We will continue to augment this pipeline during the coming years until the facilities reach optimum staffing levels.

We have also initiated an off-site radar training program at the Chicago ARTCC that has been very successful initially. The program involves sending radar students to the academy in Oklahoma City for a "site specific" radar training course on the radar simulators. The initial results have been so promising that we have expanded the program to include Oakland and Los Angeles centers.

We also have given priority to granting permanent change of station to anyone who requests a move to a critically staffed facility under our national job placement bids.

Senator LAUTENBERG. Based on what you said, these are the most difficult problems to solve in terms of staffing. The American public, of course, has to be aware that this is where the heaviest volumes of air travel takes place.

So what we are saying here, what we are hearing here, is the areas where we have most of the people flying, most of the airplanes moving, that is where the biggest shortages are. That is less than reassuring.

But we would like to have your plan for getting to full staffing level as quickly as we can. This is a bit of a treadmill that we are on. As we work harder to fill these billets, it seems that we are not able to catch up on it.

I will take a couple more questions and I want to turn it back to my distinguished colleague.

SAFETY BOARD RECOMMENDATIONS

We can at moments argue with GAO whether its work is imprecise, whether it is a qualitative evaluation. But we have another agency, I assume, that earns a degree of respect around here, and that is the NTSB. Now, you had a dispute with the Chairman of NTSB.

And I want to ask you, do you think that he is crying wolf?

Admiral ENGEN. First of all, let me say I have no dispute with the Chairman of the NTSB. Having worked with the Chairman and having worked on the Board, I understand the Safety Board Act. I understand how it functions and I am wholly supportive of it.

I want to assure you that this agency, my agency, probably is more compliant with NTSB recommendations than any other transportation agency.

Senator LAUTENBERG. Then when he asks for a reduction in service, is he crying wolf?

Admiral ENGEN. No, sir; right now as you and I are sitting here, we are metering that flow through flow control.

Senator LAUTENBERG. What about the supervisors who reported to GAO last year that about 2,000 radar controllers under their supervision were handling more peak period traffic than they should? Do you believe that or do you not?

Admiral ENGEN. I would believe it if it is recorded.

Senator LAUTENBERG. So if they are handling more traffic than they should, again, there is inherently an opportunity for a miscue.

Admiral ENGEN. Having said that, they are also backed up by their supervisors. Air traffic control is a very exacting occupation, and there is probably in every air traffic controller's day a period of time in which he or she feels burdened. It is the nature of the job.

Senator LAUTENBERG. That is why we have to be especially sensitive to not putting more on them than they can handle. That is why we also should be especially sensitive to the risk that automatically develops under conditions of stress and tension.

I am going to ask my colleague, please. I have kept him a long time. Go ahead.

IMPACTS OF A HOLD-THE-LINE BUDGET

Senator D'AMATO. Yesterday, the Senate adopted a budget which did not provide for the 20-percent increase which the FAA had asked for. As a matter of fact, that budget would be basically a hold-the-line budget. And I am wondering how in the world we are going to accomplish the upgrades as it relates to safety, given the budget which the Senate enacted last evening.

And I know you have Mr. Stoer here. I am wondering, Admiral, if you would make any comments or Mr. Stoer would respond. He has a pretty good idea of what the Budget Committee, the Senate Budget Committee, had recommended, and what is basically what has transpired on the Senate floor.

How will you deal with that and what will the ramifications be, understanding that the $55 million has been provided in the supplemental for the additional 255 controllers or the 225. How will that impact on the FAA, and where will you make up those dollars? What programs will suffer?

Admiral ENGEN. Thank you, Senator D'Amato. Let me say first of all, the ramifications are such that I have not been able to figure out how we can operate. In a word, the impact of that resolution on the Operations Appropriation, which is what we are talking about, could be devastating.

I see it perhaps as causing air traffic delays in 1988. If it were applied rigidly, it cuts $250 million or perhaps $300 million from our request. And we have almost $300 million of new mandatory costs coming next year, including the new retirement system, the cost of the January 1987 pay raise and the inflation, and those communication costs that I spoke of.

My appropriations request for operations is three-fourths payroll. So we cannot control that item. The employees will take the brunt of that cut.

The first-order effects would be specific cutbacks, which I can describe for you. The second-order effects would be terrible employee morale that we have been talking about, because people will be forced to take holidays or time off, unpaid time off. A hiring freeze would probably have to be reinstituted.

And I could probably go on. I do not want to bore you with that. But I think if I could come back to my initial comment, that it could be devastating, sir.

Senator D'AMATO. It is not boring to this Senator. As a matter of fact, it is disconcerting, but I think it is important that it be placed on the record. And so what I am going to do, Admiral, is ask you if you would not send to the chairman and myself, of this committee, an outline as it relates to your review.

I am not going to ask you again to attempt to be too specific, because we did not pass this until last evening or this morning at about 1:30, as to how you will have to deal. What programs, what plans of actions you will not be able to undertake.

You had asked for an increase of roughly 20 percent, $1 billion. Given the level of budget authority that has been permitted, what will this do if these levels are maintained? I am concerned because I know that we are going to have to make some difficult decisions in the transportation dollars that are allocated.

We have to see as a first priority that safety is maintained, and I believe that the chairman has a commitment to that, the chairman of this committee, second to no one. And I look forward to working with him, to seeing that these resources are utilized in such a manner that we do not further impair the air safety or set back the progress that has begun to unfold, notwithstanding the deficiencies that I believe exist.

And I think there are serious deficiencies. I do not think you can say the situation is well when in major facilities throughout this country we are forced to press people to work overtime beyond what is reasonable, we are forced to turn to management to fill the breach and to fill the gap in such a disproportionate way.

And so, to compound this by reducing the level of funding—and in essence, what you have indicated, that is exactly what a hold the line would be doing, because you have additional costs, salary increases, personnel costs go up. And so you would be actually losing about 3 percent or $30 million plus, which would necessitate hiring freezes, certainly no additional people in the way of the work force to undertake these safety programs.

And I am very much concerned. So I would ask if you would submit that information to us.

Second, I would like to touch on the matter of the training facilities at the academy. How many people do you graduate there who actually go into the FAA service, who actually go into those control towers? How many did you graduate last year?

Admiral ENGEN. I would like to ask Mr. Weithoner to respond to that. First, if I could thank you very much, you and the chairman, for your interest in seeking appropriate amendments to the budget resolution, because I really do think that we will have serious disruption to air commerce in 1988 if those budget levels are enacted.

Senator D'AMATO. We had Admiral Yost here last week. And let me tell you, all of the grand talk about our war against drugs and giving our mantle of leadership, so to speak, to the Coast Guard for interdiction—after all, we are not going to ask the local sheriff to stop the freighter that is coming from Panama and it is offloading its drug cargo 100 miles off, to be involved in that interdiction effort, or even the State troopers.

And so we look to the utilization of the Coast Guard and the Navy, et cetera. The Navy says, look, that is not our mandate. We say: All right, we will train people, we will put them on Navy vessels, et cetera.

Well, the money, the $15 million for that mission, the $75 million for additional personnel, has not been budgeted. And so we in the Congress, who say one thing before the election in November and have another way of quickly forgetting—you know, the question is will you remember me in December, the way you promised in November.

There is a tremendous gap between our rhetoric, our commitment, the sensational headline-grabbing situation, and that which transforms in the ordinary course of business. And so Admiral Yost is faced with the situation where he says: Look, we are not going to be able to meet that charge.

In your situation, I do not even know how we can begin to think or tolerate the idea that the safety in the skies, which is of paramount concern to this committee and to, I think, most Americans, could be further jeopardized. We are going to have to make some tough decisions.

I think it is important for the American people to know that this is an area where there is contemplation by the Budget Committee and by the Senate as a whole that it would be reduced.

I would like to know, if you would, if you would touch on that.

AIR TRAFFIC CONTROLLER TRAINING

Mr. WEITHONER. In fiscal year 1986, we had 1,970 people enter the academy for initial training as air traffic controllers. Of those, 1,222 passed. That is 62 percent, and then went on to——

Senator D'AMATO. 1,000?

Mr. WEITHONER. 1,222.

This fiscal year we are putting in about 3,000. We expect about 60 percent to pass. That is about 1,800.

Senator D'AMATO. You graduated 1,222, is that correct?

Mr. WEITHONER. Yes.

Senator D'AMATO. How many of the 1,222—did all of them go to work?

Mr. WEITHONER. They all go to facilities as soon as they finish their training in Oklahoma City.

Senator D'AMATO. How many of them are presently, let us say 1 year after they are entering into the work force of the FAA, how many of the 1,200 are still there?

Mr. WEITHONER. During the first year, the percentage would be quite high. I would make a guess that at least 90 percent of the 1,200 will still be working in the facilities today.

Senator D'AMATO. I would appreciate very much if you could give us a 3-year breakout for the record, and that is the number of people who have graduated, the number of people at the end of 1 year who are in the FAA, the number of people at 2 years, and the number at 3. Give us some kind of indication as to how we are doing on that.

[The information follows:]

During calendar years 1982 and 1983, 8,144 air traffic control trainees were hired and 4,767 of that number successfully completed the academy training program which was approximately 13 weeks long. Of those who completed the training, 4,157 (87.2 percent) were still on board 1 year after their training. Two years after training, 3,817 (80.1 percent) were still on board. Three years after training, 3,686 (77.3 percent) were still on board.

Senator D'AMATO. Are you saying basically we are adding about 1,200, 1,000 to 1,200 annually?

Mr. WEITHONER. It is not a net addition.

Senator D'AMATO. Let us go to the attrition part. How many are we losing? How many FPL's and/or controllers who are not fully certified are you losing?

Mr. WEITHONER. You lose them in various ways, as you know. If you are talking about trainees just starting out in the system, some of them will not make the upgrade training. They will not successfully complete their training. Some of those will actually go out the door. They are lost to the FAA.

In some instances, we are able to take a person who is not able to be successful at one of our busiest facilities and relocate him to a lower activity facility.

Talking about the full-performance controller, full-performance-level controllers, those who have been with us quite a while, a certain number of them retire, about 500 a year.

Senator D'AMATO. You lose about 500 a year through retirement. So in order to keep that level, you have got to make a level of about 500 just to keep the attrition factor?

Mr. WEITHONER. Yes; that number would go up or down depending upon the composition of the work force. But it has been running around 500.

And then you have people move out of controller positions and into other types of jobs where they are not actually controlling the traffic, and you have to replace them, too. That is why we will bring in this year, this fiscal year, about 1,800 people into the bottom of the system, and that covers retirements—or in the years ahead it will cover retirements, promotions, and other kinds of losses.

Senator D'AMATO. There are certain things you have had to do at that school to increase your training capacity?

Mr. WEITHONER. Yes; we are actually training now at a lower rate than we did after the strike. But we have adjusted up and down depending on the staffing levels and the attrition rate.

Senator D'AMATO. Could you train more?

Mr. WEITHONER. Yes; we could. We have trained as many as 5,000 approximately in a year, and if we added instructor staff and added an additional shift at the academy we could expand.

Senator D'AMATO. But you are now going to be training at the rate of approximately 3,000? That will give you 1,800, that is what your estimate is?

Mr. WEITHONER. Yes, sir.

Senator D'AMATO. Mr. Chairman, I have no further questions, but I would ask the Admiral if he would not get to us—if he would get to us a breakdown as it relates to the budget impact, what he sees, what programs he will not be able to undertake, so we will be in a position, Mr. Chairman, to bring this matter to the attention of our colleagues as it relates to the budget allocations and the appropriations.

[The information follows:]

IMPACT OF SENATE BUDGET RESOLUTION

The impact of the Senate Budget Resolution will require stringent actions. Approximately 75 percent of the operations appropriation funds are to pay for employees and 83 percent of those employees are engaged in the operation, maintenance and inspection of the National Airspace System. Of the remaining 25 percent for nonpersonnel costs, many vital and unavoidable requirements exist, such as for leased telecommunications in direct support of the air traffic control system, increased rental and utility payments for operating facilities, contracts for weather services and preparation of aeronautical charts and travel associated with inspection and maintenance that must be funded.

Under a freeze, we would have to have certain "must fund" increases such as personnel compensation adjustments for existing employees, GSA rental increases, and rate increases for leased telecommunications services in support of the air traffic control system.

In order to accommodate these "must fund" items, the following actions would be necessary:

- An agencywide hiring freeze, where new hires would be restricted to replacements for attrition in the controller, inspector, and maintenance work forces.
- Postponing the realization of hiring targets for specific work forces, such as controllers, inspectors, security specialists.
- No increase in controllers despite a 6-percent increase in traffic.
- Freezing the field maintenance work force at a point when it is beginning to recover from the fiscal year 1986 freeze.
- No increase in safety inspectors and security staff despite increasing workload requirements.
- Cutback in overtime essential to handling peak workload period requirements.
- A sharp reduction in permanent change-of-station (PCS) relocations. This would quickly lead to a poor distribution of critical technical skills needed to replace retirements and promotions.
- Restrictions on travel associated with inspections and maintenance and on training.
- Reductions of nonpersonnel programs in the support area, that is, ADP support for aviation safety.
- Furloughs of 9 to 16 weeks for each FAA employee.
- Suspension or deferral of within-grade and merit promotions.
- Deferral of most agency initiatives including:
  - —Long-range radar replacement program
  - —Terminal doppler weather radar program
  - —Pilot test of contract maintenance
  - —Replacement of several obsolete control towers
  - —The Advance Automation System
  - —Several other major NAS plan projects.

AIR TRAFFIC CONTROLLER NUMBERS

Senator LAUTENBERG. Thank you, Senator D'Amato.

The thing that my distinguished colleague was talking about, that is trying to understand how it is we are going to create the staffing level that we need with turnover, with potential retirements, with stress on the individuals—it looks like it is very tough to fill the reservoir of people that we need.

And we continue to debate the numbers. I wrote to you on February 19 about my concerns with your implementation of the expanded east coast plan, and I wanted to be sure there were enough people in the towers, enough people en route to be able to handle this change in program.

It took 2 months for a response. In your letter, you referred to facility staffing levels on board. That is where we seem to run into loggerheads.

When you talk about your 15,000 people in the controller staff, are these—does this include trainees? Does this include people in development? Are they considered controllers?

Admiral ENGEN. They are those who are eligible to become controllers, they are included in the 15,000, yes, sir.

Senator LAUTENBERG. Air traffic assistants?

Admiral ENGEN. Yes.

Senator LAUTENBERG. Do you dispute the GAO response on FPL's, again without trying to be too specific in numbers? Are you short of the FPL controller level that you would like to have at this juncture?

Admiral ENGEN. I am, yes, sir.

Senator LAUTENBERG. How many of those would you say you are short?

Admiral ENGEN. Let me be sure I understand your question. Do you want me to talk about the numbers of FPL's?

Senator LAUTENBERG. Those that you need and those that you have.

Admiral ENGEN. I am going to give you an evaluative opinion, Mr. Chairman. By my figures, we are at about 9,500 FPL's. I believe, given the work standards that we have established since the strike, given the computer upgrades and automation that we have been able to accomplish, that if we can get that FPL level up around 13,000 we are going to be fine.

I do not think we will ever reach 13,000, and probably something like 12,000 will be more achievable.

Senator LAUTENBERG. Your aim is 13,000.

Admiral ENGEN. I say in the best of all worlds the Administrator of the FAA would like to have 13,000. I think about 12,000 is what we are going to be able to achieve.

Senator LAUTENBERG. I think we had 13,000 in 1981. I know there is a dispute about whether they were overloaded or not. Right now by your own admission you have 9,500.

What is necessary to run the system right now so that we can feel good about not overstressing the individuals?

Admiral ENGEN. Let me assure you that we are dedicated not to overstressing individuals. You have shown me five en route centers which I agree are the en route centers at which we are concentrating.

The controller work force is not being overextended. Our 1988 goal, as I told you in my opening remarks, was 10,258. We need to grow to that level, but we cannot, as I said, shut down the system and just turn out hundreds and hundreds and hundreds of people.

We have got to be able to assimilate them into the system. So our plan is to gradually approach that level.

AUTHORIZED STAFFING LEVELS

Senator LAUTENBERG. I know you want to do it gradually and I understand the need to do that. But here we have—this again is the GAO response. We have authorized 4,900—I am rounding off here—FPL's. To use your onboard terminology, we have 2,800.

Does that seem wildly disproportionate?

Admiral ENGEN. We do not know what figures we are looking at here.

Mr. WEITHONER. Overall in the centers, regardless of which way you count, we have about 60 to 61 percent of the authorized staffing. That is all centers, not just the 16 you have identified there. So 60 percent of the 5,000 would be about 3,000 full-performance-level controllers. I think that number is in the ballpark.

Senator LAUTENBERG. Was that authorized level a serious objective as far as you are concerned?

Mr. WEITHONER. The authorized level does not apply to full performance levels only. We have not had a chance to research that number, as you know. Based on a quick scan of the GAO report last night, it appeared to me that the authorized level is the level authorized for the entire facility.

It is the number on the left side there. I think it also covers facility managers, the secretarial staff, training staff, data systems specialists, and people like that. It may give a somewhat distorted notion of the staffing.

But in general, the 60-percent level is OK.

Senator LAUTENBERG. That is a significant shortage, obviously. And again, if the authorized levels were something we seriously wanted to do, we are woefully short if we have 40 percent less.

Now, either the top number is wrong or the bottom number is wrong. Otherwise, it is fair to come to the conclusion that we are woefully short of where we ought to be.

Mr. WEITHONER. I would like to point out that the direction we got from the committee last year asked us to try and achieve a 60-percent level in our larger facilities, 60-percent full-performance level.

Senator LAUTENBERG. Was that the minimum level they wanted you to achieve or was that the max?

Mr. WEITHONER. That was the minimum level the committee asked. And we are in those 16 facilities about there, I believe.

Senator LAUTENBERG. Minimums are not good. Did you ever fly under very low minimums? You know that they are not good.

Admiral ENGEN. I would like to say that our goal is really to reach about 80 percent FPL's, but you will never reach 100 percent. We were not much above that before——

DEFINITION OF AN AIR TRAFFIC CONTROLLER

Senator LAUTENBERG. I really think we ought to establish goals that are realistic and try to project. This is not a very complicated permutation. It is easy to do that. You can almost do that on a desk calculator.

Your definition of controllers, GAO says, includes some who do not control traffic and excludes others who do control traffic. Now, is there a problem with the definition that you use out of your own text here when you arrive at a number, 15,089? Would that differ with the GAO's definition?

Is Mr. McLure still here?

Mr. MCLURE. Yes.

Senator LAUTENBERG. Have you looked at the accounting here that we have gotten from FAA? You have seen those numbers, I assume?

Mr. MCLURE. I do not know that I have seen that exact sheet, but there is—last year we testified before the House that we felt that FAA could more clearly define the total work force by calling those people who actually control traffic, traffic controllers and those who do not control traffic something else.

The controller work force as FAA defines it includes people who do not control traffic.

Senator LAUTENBERG. So they are working on a consistent basis, even if we disagree?

Mr. MCLURE. Yes.

SAFETY INSPECTOR NUMBERS

Senator LAUTENBERG. GAO, Admiral—and I will try to wrap up real soon—has also reported that inspectors, safety inspectors, are not where they ought to be. You say during fiscal year 1987 you plan to make 145,000—and permit me the license of rounding off—inspections of all types, including 85,000 top-priority inspections of carriers, air carriers, and air agencies.

These inspections are in addition to other activities, of course, such as accident investigation, airman certification, new entry certification, increased workload in manufacturers.

By our calculation, if you have about 1,900 inspectors your plan works out to be about 77 inspections per inspector. The arithmetic, again, we are not going to be off a lot.

How long does it take to complete a typical air carrier and general aviation inspection?

Admiral ENGEN. I would ask Mr. Broderick to answer that.

Mr. BRODERICK. Mr. Lautenberg, those are total variables. It can be anywhere from as short as less than an hour for a very simple inspection of a very simple thing to literally a couple of months' involvement in a single major inspection.

The way we deal with that complexity is that every single inspection type that is required for every single type of facility, in every single geographic area, is accounted for in our development of staffing standards and work requirements.

So the answer to your question is a calculation I could make, but it is not one that drives our——

INSPECTION QUALITY CONTROL

Senator LAUTENBERG. It sounds reasonable. Seventy-seven a year would be a staggering assignment if it were of the more complicated type.

What is the system of quality control for you to ensure thoroughness of inspection? What do you do? Those numbers that I originally proposed, how do you guarantee that those things are done thoroughly?

Mr. BRODERICK. The biggest single quality control mechanism that we have is something that we have been woefully short of in the past. That is an evaluation system whereby we take different people than are assigned the work to go out and evaluate how an office is doing, for example, like how Teterboro is carrying out its assigned work.

It is a two-way street and it is an evaluation that helps us, whether it is the regional management or the national management, understand how the office is carrying out the work programs.

It is also an evaluation which helps us understand what we are not doing, that the office needs to be doing, in terms of things like guidance and staffing standards. That is the single most important thing. It is an internal audit kind of thing that is formalized throughout the agency.

INSPECTION GOAL

Senator LAUTENBERG. That sounds like something that is not an insurmountable task to develop. And if I were back in the computer business, I would look for a contract from FAA on this.

You had a plan of 145,000-plus inspections this fiscal year. How many were completed by mid-fiscal year?

Was the 145,000 realistic? It may not have been a realistic number, but that is what you said you were going to do.

Mr. BRODERICK. The plan is roughly on target. We are, in fact, not happy with some of the shortages that we have with regard to skill mix in areas where we have, for example, an avionics inspector shortage or maintenance inspector shortage. We are also not at all happy with the total number of inspections that are being done. Obviously we are asking for more inspectors because we need them.

In general, we are working along the track that we have planned.

Senator LAUTENBERG. Since you used the number that is what we have to deal with. You said you were roughly on track?

Mr. BRODERICK. We would be happy to supply the data for the record.

Senator LAUTENBERG. I have the data. I am surprised you do not. You are 62,000 for the year less than you planned for last year. Last year you planned something like over 200,000.

Mr. BRODERICK. Yes, sir; last year, I might point out, was the very first time we had used that kind of system, and we had the normal kinds of shakeouts. For example, we have avionics inspection scheduled for single engine airplanes, which is clearly not the kind of thing that is appropriate. Those kinds of things need to be improved. It is part of a long-range effort that we have been working on to develop that kind of planning tool that is linked directly to staffing and workload.

Senator LAUTENBERG. The assignment for this year, even though it is lowered, may be unrealistic. You have no feel for where you are half way through the year?

Mr. BRODERICK. As a matter of fact, I have looked at the data for a subset of that, which is the minimum work program guidelines, and we are anywhere between 35 and 55 percent accomplished at the midpoint of the year for what we call the required inspections, not the optional one.

INSPECTOR TRAINING

Senator LAUTENBERG. GAO also reported that inspectors are not properly trained before they have to make inspections. You sent out a report April 23, 1987, to this committee, one that is required by Public Law 99–591, confirms that many of your inspectors had not yet completed some basic mandatory courses. For example, only 118 of the 462 air carrier operations inspectors had completed the mandatory course entitled, "Air Carrier Operations Inspector Turbojet Evaluation."

Does that mean that those who did not take the course cannot make these air carrier operation inspections?

Mr. BRODERICK. What it says is that no one is allowed to do an inspection that they are not properly trained and signed off for.

For example, if there is an en route inspection that requires evaluation during flight and they have not received that kind of training, they would not be able to do it.

Senator LAUTENBERG. Does that leave you, therefore, short of the trained staff you need to do this job?

Mr. BRODERICK. Yes, sir.

FAA PENALTIES

Senator LAUTENBERG. Over the past 2 years FAA has levied some of its largest civil penalties, all of which were against major carriers. Admiral, what does that mean? Does that mean noncompliance by the larger carriers is increased? Does that mean we would find the same thing if we got to the smaller carriers? FAA inspectors are getting tougher? What do we conclude from this?

Admiral ENGEN. Mr. Chairman, in 1983 there was a landmark accident which was in the Midwest, and it showed we in the FAA needed to redouble our efforts in the inspection program. Secretary Dole initiated the white glove inspection in 1984. I came along about that time. We completed that. I looked at the system. There was a general trend in the airline industry to not be fully compliant.

We stepped down hard, and I wish to report to you, sir, that in 1987 I find that the airline industry as a whole is a very compliant industry, and I find that the airlines individually and collectively try to meet the federal air regulations. I believe that those large fines that were levied for a purpose have accomplished that purpose, and I do not want to forecast what fines are going to be in the future because we do each on an individual basis. I find the airlines more compliant today.

Senator LAUTENBERG. We recommend diligence and heavy-handedness when it comes to fines. Just briefly on transponders. Last year you told this committee that midair collision problems were essentially restricted to general aviation aircraft operating at low altitudes. I am familiar with that one.

The accident in Florida recently is an example of that. However, you testified last month before the House Public Works and Transportation Committee that near midairs now increasingly involve air carriers or commuter aircraft and a general aviation aircraft. Do you agree with the NTSB that we cannot depend on see-and-avoid rules because of the limitations that we have in human reaction times, cockpit visibility, et cetera?

TRANSPONDER REGULATION

Admiral ENGEN. Mr. Chairman, we have a rule which will require the turning on of all transponders. We are going to require C mode encoding transponders to improve that. I personally have practiced see and be seen at mach 2, people who are coming at me at mach 2, which makes mach 4. It can be done. It is a very difficult thing. Having flown my entire life, I want to say to you, sir, that see-and-be-seen rule is the very basis of much of the airspace in the United States today, and we need to keep those people who fly at the low altitude, or the low speed envelop, firmly ensconced in see and be seen.

Senator LAUTENBERG. Forgive the smiling. I know you are talking about serious stuff. I have flown at one-tenth of a mach in see and avoid, or see and tremble kind of a mode. While it is all right, I would hope that we can do better than that. You sure would not want to see a see and avoid in a 747 hollering, "Charlie, for crying out loud, look at that guy."

The mode C, at least lets us know who is out there, where he is, how fast he is going, et cetera.

Admiral ENGEN. We are going to mandate the carrying of transponders by aircraft.

Senator LAUTENBERG. We hate to burden general aviation, especially small aircraft owners, with that kind of a job. But for $1,200 to $1,500 it protects everybody.

Admiral ENGEN. I would like to call to your attention that there are between 30,000 and 40,000 airplanes in the skies of the United States that do not even have an electrical system.

REHIRING FIRED CONTROLLERS

Senator LAUTENBERG. We are going to have to get tough. They are using a precious resource. Even that beautiful blue sky has its limits. We cannot depend on see and avoid to keep our airways safe.

Admiral, I thank you very much. I do not mean to be testy. I am frustrated by the same things that you are, and that is the inability to catch up. I will leave you, just so you will know I have not changed my spots since I have gone from minority member of this body to a majority member, chairman of the committee, I am still going to push you or your successor to look at that pool of labor out there.

I for one take a very dim view of a decline in morale based on whether or not we hire this guy who left the system illegally 6 years ago. They are out there. Punishment has long since been administered. It has been felt. The lashes are deep, and they will be remembered forever, and I think we ought to get past that phase.

I am struck by GAO's response when I ask about how the people they talk to would feel about rehiring selectively, at the bottom of the ladder, of those who had passed the test of academics as well as emotion to survive in a controllers job? How they would feel about having them back? They said slightly more or more than half would not want it.

I would submit that the Commander in Chief of the FAA, whoever he or she may be, that that is the kind of a selling job that I think, very frankly, is easy. When I hear the kind of rustling that is going around there, the reformation perhaps of a controllers' union, people gripping about excessive overtime, supervisors working on the line, arguing about definition of FPL's. Do we have enough. Do we not have enough.

I know we do not have enough. You and your colleagues know we do not have enough. Everybody, including the least sophisticated air traveler, knows we do not have enough because we sound the alarm often and loudly.

I implore you, the Secretary of Transportation, the President of the United States, stop, for crying out loud, being so stubborn about that pool of labor. Reach into it if you have somebody you like. Do not shut them out. I guarantee you that if you cannot do it, or your colleagues cannot do it, I will sit down with controller group after controller group and I will tell them why it is good to have more soldiers in our army, more sailors in our navy. That is what we need to protect the American public, and I would submit to you that eventually this will be a ground swell, and we will be reaching in there.

As we look at more and more of these charts and have these indelicate discussions at times about whether or not we have done what we had to do and try to figure out why we have not, and what there is that is good out there when we know it is not totally good, that discussion has got to come to an end. We both want to get to the same objective.

Admiral, we look forward to seeing you tomorrow and off in the future. I hope you will be around, at least associated with enterprise connected with government even in the private sector. You are a skilled individual, you are a committed individual. I respect that greatly.

SUBCOMMITTEE RECESS

We are going to have questions for you submitted in writing by me and other senators who could not be with us. I thank you and your colleagues for responding and for being with us for such a long period today. This committee hearing is adjourned.

[CLERK'S NOTE.—The FAA submitted questions and answers for this hearing and the May 8 hearing have been combined and inserted at the end of the May 8 hearing.]

[Whereupon, at 12:40 p.m., Thursday, May 7, the subcommittee was recessed, to reconvene at 10 a.m., Friday, May 8.]

DEPARTMENT OF TRANSPORTATION AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1988

FRIDAY, MAY 8, 1987

U.S. Senate,
Subcommittee of the Committee on Appropriations,
Washington, DC.

The subcommittee met at 10 a.m., in room SD–138, Dirksen Senate Office Building, Hon. Frank R. Lautenberg (chairman) presiding.

Present: Senators Lautenberg and Kasten.

GENERAL ACCOUNTING OFFICE

STATEMENTS OF:

- **HERBERT McLURE, ASSOCIATE DIRECTOR, RESOURSES, COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION**
- **CARL PALMER, ASSOCIATE DIRECTOR OF THE INFORMATION MANAGEMENT AND TECHNOLOGY DIVISION**

ACCOMPANIED BY:

- **ANDREA LEOPOLD, SENIOR EVALUATOR, INFORMATION MANAGEMENT AND TECHNOLOGY DIVISION**
- **CHARLES COTTON, GROUP DIRECTOR, RESOURCES, COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION**
- **ART SHANTZ, SENIOR EVALUATOR, RESOURCES, COMMUNITY AND ECONOMIC DEVELOPMENT DIVISION**

OPENING REMARKS

Senator Lautenberg. We will call the Subcommittee on Transportation of the Appropriations Committee to order.

Today the subcommittee is going to consider the requests for FAA's capital programs. The request for facilities and equipment, which contains funding for the NAS plan, is $1,350,000,000. This represents an increase of $545,416,000, or 68 percent, over the amount enacted for this fiscal year.

The request for research, engineering, and development is $150 million, an increase of $8.3 million over fiscal year 1987.

And the limitation on obligations proposed for the airport improvement program is $1,017,000,000, up slightly from the $1 billion ceiling now in effect.

No one disputes the need to modernize and expand the infrastructure of our national airspace system. We obviously have to have more capacity to accommodate the continuing growth in air commerce. Added capacity should help to alleviate some of the pressures that are impeding efficiency and eroding the margin of safety in our air traffic control system.

But we can't solve the problems by simply throwing money at them; even if it's trust fund money. We have to make sure that the multibillion-dollar investments that we're making are going to be properly designed, carefully targeted, and prudently managed. And that's the sum and substance of the issues we are going to be discussing this morning.

We are again fortunate to have a panel of GAO analysts to begin today's hearing. The principal witnesses for GAO are Mr. Herbert McLure, an Associate Director of the Resources, Community and Economic Development Division; and Dr. Carl Palmer, an Associate Director of the Information Management and Technology Division.

And after we have had the opportunity to hear from them the subcommittee is going to hear from Admiral Engen and his colleagues from FAA.

Mr. McLure, we welcome you, and look forward to your comments, and ask you now to proceed.

STATEMENT OF HERBERT MCLURE

Mr. McLURE. Thank you, Mr. Chairman. I would like to introduce Dr. Palmer and Andrea Leopold, from our Information Management and Technology Division, and Charlie Cotton and Art Shantz from the staff I work with, who have done a great deal of work over the past few years on the NAS plan.

Senator LAUTENBERG. As a matter of fact, you have done so much work, Mr. McLure, we are entitled to hear you very well.

Mr. McLURE. Thank you. What I am going to do, is talk about four of the major systems, and Dr. Palmer is going to talk about the advanced automation system, which is the largest single part of the plan.

Before I do that though, I would like to just give you a little background about the plan itself and where FAA is with it. Because it is a big procurement plan, in fact, it is about the second largest civilian procurement in our history, we have been asked to look at it quite a bit.

Over the past few years, what we have found is that what FAA thought it could do originally has taken considerably longer than FAA thought it would take.

The reason the plan is delayed has to do with the complexity of the system, the fact that they underestimated its complexity, underestimated the time it would take to develop the software, and underestimated the time needed to develop their own requirements. That is, to understand what their——

Senator LAUTENBERG. The they in this case is?

Mr. MCLURE. Is FAA. So, when you talk about time delays, what you are really talking about is an original underestimation of how long this project was going to take.

FAA thought it would be basically an off the shelf procurement. It turned out not to be. Because they thought it was going to be off the shelf, FAA decided to use what we call a concurrent procurement process. By that, I mean they intended to contract both for development and hardware procurement at the same time.

We often have shown that this approach leads to increased technical, operational, and economic risks in highly complex government programs, including defense weapon systems. For example, we testified on February 25, 1987, that the high degree of concurrency between development and production of the Air Force's B-1B bomber contributed substantially to that program's problems. We concluded that, for a technically challenging development program, one that advances the state of the art, testing and development should be reasonably complete before production begins.

FAA has recently changed its acquisition process to correct some of the problems that have contributed to NAS plan delays. FAA also is rethinking its approach to acquiring or designing individual systems.

These improvements are too late to benefit most of the major NAS plan systems, but a few, including the critical advanced automation system could still benefit. The same should be true for other NAS plan projects that DOT designates as major systems subject to FAA's new policies and procedures, such as the recently added terminal Doppler weather radar.

FAA ENTERING CRITICAL PHASE OF NAS PLAN

The NAS plan is approaching a critical phase in which many contractors will begin delivering hardware and software to FAA field sites. The challenge for FAA will be not only to install the systems but to integrate more than 1,000 interfaces between the various radars, data processors, and data links that comprise the NAS plan.

This phase is complicated further by the number of groups involved. FAA headquarters retains decisionmaking authority.

Martin Marietta is responsible and accountable for the NAS plan effectiveness and provides systems engineering and integration services to FAA. FAA is also going to hire a technical support services contractor to provide hands-on hardware installation, testing, and to a lesser extent, site preparation for possibly 20,000 separate facilities and pieces of equipment.

Then there are nine autonomous regions in FAA as well who are to provide direction and support to the technical support services contractor. They are also going to be contracting competitively themselves to have facilities constructed and installed.

So, it is going to be a difficult undertaking with many people involved. It has become increasingly apparent to us that even with substantial management efforts, the NAS plan integration challenges lying ahead for FAA are such that further delays and other acquisition problems may be unavoidable.

EFFECTS OF NAS PLAN SCHEDULE DELAYS

In addition to delaying various anticipated work force productivity gains, existing and expected NAS plan schedule delays are having, and will continue to have, a variety of other effects.

For instance, NAS plan delays have postponed almost $38 billion in anticipated aviation user benefits. These include $24 billion in reduced airline schedule delays and almost $14 billion in fuel efficiencies that are expected to result from allowing users to operate with a minimum of artificial constraints along user-preferred routes.

The airlines and the traveling public are becoming increasingly dissatisfied with mounting schedule delays. Delays are up 24 percent in 1986 compared to 1985. And the airlines are pressing FAA to reduce certain aircraft separation standards now—even though the advanced technologies in the NAS plan that will permit FAA to better track aircraft so that it can reduce separation standards without compromising safety—have been delayed.

Another effect of NAS plan delays is that revenues in the plan's funding source, the FAA trust fund, were set in 1982 at a level that would have paid for the plan if it had proceeded on schedule.

Schedule delays over the past 5 years though, have resulted in a huge unused balance that FAA estimates will reach $5.6 billion by end of fiscal year 1987.

FAA, DOT and others have pointed to the appropriations shortfall as a reason for NAS plan delays. Our work, however, shows that none of the NAS plan major systems have experienced a shortage of funding to date.

FAA simply has not been able to accomplish as much as they originally anticipated in the 1981 plan on which the fiscal 1982 through 1987 authorizations were based.

TERMINAL DOPPLER WEATHER RADAR

In the meantime, our work on four NAS plan major systems has identified issues that should be addressed before fiscal year 1988 funds are appropriated. Despite recent changes to FAA's acquisition process, the current implementation schedule for the first of the four systems—the terminal Doppler weather radar—does not allow adequate time to resolve the many technical issues that are still outstanding.

We recognize that this system has some significant safety benefits and recommend that the Congress appropriate the $130 million requested by FAA in fiscal year 1988. We believe, however, that FAA should be required to identify the safety and other implications associated with any unresolved technical issues, and adequately demonstrate that the system can meet at least the minimal requirements before committing to production of the system.

MICROWAVE LANDING SYSTEM

We have also looked at the microwave landing system. Everybody refers to that as MLS. It is the second most expensive NAS plan project. It is going to cost about $1.5 billion. FAA currently plans to replace every existing instrument landing system [ILS] in use with an MLS.

This, in turn, will require every aircraft owner who wants a precision landing capability to buy new onboard MLS equipment, including the commercial fleet and over 50 percent of the general aviation aircraft which are presently equipped to use the instrument landing system.

Our continuing evaluation of this system raises policy issues concerning FAA's current procurement and implementation plan. MLS was originally justified in 1969 as a replacement for ILS. During the intervening 18 years, FAA has largely fixed the problems they had been having with ILS. For example, solutions have been found, and are now being implemented for the ILS's reliability, siting and radio channel congestion problems.

Improvements to both onboard avionics and ILS ground-based equipment, now permit more landings under lower ceiling and visibility conditions than before.

On the other hand, there are some airports and runways where precision landing capability is justified, but an ILS cannot be sited; where operations like helicopter activity, may economically justify MLS rather than ILS; or where MLS is needed to meet international commitments made in 1978. We have found little support for FAA's current MLS implementation strategy which is to replace all of our ILS's with MLS.

Instead, the Air Transport Association and major airlines are interested in having precision landing capability at airports and on runways which presently don't have any at all.

FAA's official plan still is to acquire 1,250 MLS's under an all-or-nothing ILS replacement strategy. Toward this end, FAA is requesting $48.7 million in fiscal year 1988 to begin a 500 unit, $572 million second MLS procurement.

While we think MLS should be used when it provides important advantages, we see no basis for appropriating funds for a second buy until FAA's implementation strategy is revised to recognize MLS as a long-term complement to ILS rather than as a replacement, and a decision is made on both where to locate the 178 units that they already have and how many more MLS units are actually justified.

FLIGHT SERVICE STATION CONSOLIDATION PROGRAM

While FAA's MLS implementation strategy may have been overtaken by events, our work on the third major system, FAA's flight service station consolidation program, shows that it deserves the subcommittee's continued support.

We have recently completed work on various aspects of this program for the chairman of the Joint Economic Committee and the chairman of the House Subcommittee on Aviation. What we found is that FAA has solved most of the startup problems it had when it began consolidating flight service stations.

For fiscal year 1988, FAA is requesting $25.5 million to reconfigure model 1 software to increase the system's operating capacity and complete consolidation.

The House Committee on Appropriations has sought assurance from DOT that the present total estimated cost of FAA's proposed model 1 reconfiguration will not grow, and that this option is the most cost-effective and timely alternative available.

Our work to date indicates that FAA's proposed approach may not be the most cost-effective and timely alternative.

Under FAA's proposed approach, consolidation of the remaining flight service stations would begin in October 1989 and be completed in August 1993. Another alternative developed by the Mitre Corp. for FAA, would permit consolidation to begin now, thus permitting FAA to capture additional efficiency benefits at less cost than FAA's preferred approach.

This is possible because Mitre proposes to use automation hardware and software as well as data processing systems that FAA has already purchased.

We are currently drafting the report on this subject.

CHANGE IN WEATHER OBSERVATION PLANS

In a fourth area we have also found some evidence suggesting FAA may be changing its approach to providing weather observations for areas previously served by flight service stations that have been closed.

FAA plans to provide weather observations by contracting out for weather observers. Once the plan is implemented, FAA's consolidated flight service stations will meet the legislative requirement in the Airport and Airway Improvement Act of 1982 to provide as good or better weather information than the old flight service stations did.

FAA's fiscal year 1988 budget request, however, includes $2.7 million to begin installing automated weather observing systems, at locations where flight service stations had been providing weather observations before they were closed.

FAA's justification is that this is cheaper than providing weather observations through contracted weather observers.

Our work on this fourth system, presented in a July 1985 report, found that FAA's operational testing had shown that AWOS did not meet all of FAA's operational requirements for the nine weather elements considered essential to providing airport and area aviation weather forecasts and to maintaining aviation safety.

Conversely, surface weather observations made by observers using equipment to measure or estimate the nine weather elements meet or exceed FAA's operational requirements.

FAA's program manager for the flight service station modernization program informed us that an AWOS has been developed and will be tested soon that FAA anticipates will meet all its weather forecasting operational requirements.

If successful, FAA believes that the improved AWOS will meet the 1982 act's requirement, and contract observers will not be needed.

If unsuccessful however, it won't meet FAA's operational requirements and will not provide as good or better weather information than the old flight service stations.

Therefore, we believe this subcommittee should consider making money appropriated for AWOS installation contingent on AWOS' meeting FAA operational requirements and the intent of the 1982 act.

In addition to our system specific recommendations, we have previously suggested remedies to the current NAS plan situation.

First, we suggested that the Congress require FAA to assure that systems function properly before appropriating further moneys for their production. Second, we suggested that FAA should produce a revised NAS plan which includes realistic schedules for project implementation and integration that can be used as a basis for multiyear authorizations and annual appropriations and that FAA can be held accountable for achieving.

This concludes my part of the testimony. Dr. Palmer will now go ahead and address the advanced automation system.

Senator LAUTENBERG. Dr. Palmer, when you make your comments, if possible try to keep them within 5 to 10 minutes.

STATEMENT OF DR. CARL PALMER

Dr. PALMER. Yes, sir; I will summarize my statement if I can submit it for the record.

Senator LAUTENBERG. You sure can.

Dr. PALMER. I am pleased to be here today, to comment on the Federal Aviation Administration's plans to modernize its air traffic control system.

In December 1985, the conference report of the two Appropriations Committees directed FAA to provide Congress with complete results of an independent benefit/cost analysis, technical risk assessment, and cost estimate before requesting acquisition phase funds.

FAA plans to complete these analyses in December 1987. However, this year the agency is asking the Congress to appropriate initial funds for the AAS acquisition contract. An FAA schedule analysis indicates that its plan to award the AAS contract in June 1988 is optimistic, and an October 1988 award is more likely. The results of the benefit/cost analysis and technical risk assessment could well assist the Congress to make a much more informed decision about this $4.6 billion expenditure.

INFORMATION TO SUPPORT ACQUISITION DECISION

What information is needed to support an acquisition decision. The Congress is considering FAA's request for $180 million to complete the AAS design phase and begin buying AAS hardware and software.

In the past the House and Senate Appropriations Committees have indicated that such a commitment should be supported by sufficient information and analyses to ensure that the investment is sound and that the AAS is ready to proceed to the acquisition phase.

However, FAA has yet to complete several of these analyses. The plans and reports about the acquisition strategy, which your committee requested, the FAA now estimates they will be completed by the end of May.

The final benefit/cost analysis is not scheduled for completion until December 1987. The request for proposals in the terminal area facility study, and the final technical risk assessment, FAA plans to conclude in August and December 1987 respectively.

We testified to the House Appropriations Transportation Subcommittee last year that FAA's strategy to award the contract before system testing entailed unacceptably high risks that could lead to significant cost increases, schedule delays and performance deficiencies.

As we proposed, both the House and Senate Committees directed FAA to incorporate a development and test phase before awarding the contract and to simulate the operational suitability and benefits of the advanced automation functions.

Although FAA revised its acquisition strategy it did not incorporate a development and test phase and both Appropriations Committees recently stated that the revisions did not fully resolve their concerns. The new strategy they stated did not provide for adequate AAS hardware and software performance information before the contract award. Two, it did not require adequate controller workstation testing or AAS hardware and software testing before authorizing workstation production. It also did not call for simulating the advanced automation functions before contract award. As a result, both Committees directed FAA to further change its strategy to: Reduce risks by demonstrating specific technologies; conduct full operational tests on the controller workstation and test it with critical AAS hardware and software before authorizing its production; and review the need to simulate AERA's advanced automation functions.

FAA's recent preliminary technical risk assessment confirms that developing the advanced automation functions does involve significant risks, and the feasibility of these functions has not been established through prototype testing and evaluation.

FAA plans to report to the committee about how it will comply with these directions by May 30, 1987.

In last year's testimony we also raised questions about whether the system, as currently defined, is an economically sound investment. We found that the benefits might not exceed costs and questioned the significance of the small increments of passenger time savings that were used, in large part, to justify the investment.

A December 1985 Appropriations Committee Conference report had already directed FAA to conduct an independent benefit/cost analysis to support its request to buy AAS.

We were recently given preliminary results from the first phase of this analysis. FAA plans to use these preliminary results to support its current fiscal year 1988 appropriations request.

Final results, however, are not expected until December 1987, and will be used to support the Department of Transportation decision and approval of the acquisition phase contract award.

Based on our cursory evaluation of the preliminary results, we are still concerned that the analysis relies heavily on passenger time savings benefits and may not have considered all feasible alternatives.

The final phase of the benefit/cost study will refine FAA's benefit estimates, including the benefits expected from AERA's advanced automation functions. This phase offers the opportunity to explore other, and perhaps more cost-effective, alternatives to perform these functions.

A final benefit/cost report is scheduled to be completed in December and could provide a better basis for Congress to evaluate the program.

OTHER USEFUL INFORMATION ABOUT AAS INVESTMENT

What other information could be useful. Other information that could be important to the congressional decision about the AAS investment will become available later this year. The request for proposals for the AAS is expected in August 1987, and should provide a detailed description of AAS proposed requirements and contract terms.

The results of a terminal area computer capacity and sustainability study are also expected in August. This study should provide information about the need to replace or upgrade computers at the busiest terminal area facilities.

Finally, the final technical risk assessment should be available by December of this year. These results should provide more information about the technical, operational, and transition risks that could affect AAS requirements and expected benefits.

What is the impact? An analysis of schedule risks conducted by FAA support contractors, shows that FAA has only about a 20-percent chance of awarding the AAS acquisition contract as planned in June 1988.

A high-confidence schedule, providing an 80-percent chance, would call for an October 1988 award date. The October award would occur at the beginning of fiscal year 1989, giving Congress time to evaluate next term, the additional information when it considers the fiscal year 1989 budget request.

REVIEW OF NEW YORK TRACON PROGRAM

As requested, I will briefly discuss the New York TRACON program. At your request, we did a limited check on the status of FAA's program to expand computer capacity at the NY TRACON facility. We reviewed the program documents and discussed program status with cognizant FAA officials.

Terminal area air traffic control requirements in the busy New York City area are met by the NY TRACON. According to FAA, the system is operating at maximum hardware design limits. FAA justified an expansion program on the basis that a critical need existed to provide additional computer capacity to meet the air traffic demands projected for this summer.

For the last 3 years, FAA has requested funds for the NY TRACON, each year indicating substantially, that no additional funds would be required. In fiscal year 1986, FAA requested $31.4 million to fund the total contract cost. In fiscal year 1987, FAA's request for $15 million to complete the program stated that additional funds were required to cover increased costs associated with the time-compressed schedule and refined system requirements.

For fiscal year 1988, FAA is requesting an additional $22 million. However, the information provided to Congress to justify the fiscal year 1988 request is unchanged from the fiscal year 1987 justification and does not fully explain specifically why additional funds are needed.

For example, according to FAA officals and internal documents, the fiscal year 1988 appropriation is to fund a contract cover overrun, and that $13.9 million will be needed in fiscal year 1989. These sources also indicate that total project costs are now estimated to be about $90 million.

During appropriations hearings in the spring of 1986, FAA officials assured both the House and Senate Appropriations Committees that its acquisition strategy for the NY TRACON minimized risks.

To summarize, FAA is requesting funds to begin buying the AAS, but important studies are not yet complete and will not be finished before Congress finishes its consideration of the fiscal year 1988 appropriation request.

Although FAA has been requesting additional funds each year for the NY TRACON, the budget justification does not fully explain the causes for the schedule delays and cost increases.

We believe, and have previously testified, that agency management and the Congress must have the best and most reliable information to make informed decisions on spending priorities reading initiating, continuing, and modifying programs.

PREPARED STATEMENT

Senator LAUTENBERG. Thank you, Dr. Palmer. Your complete statement will be inserted in the record.

[The statement follows:]

STATEMENT OF CARL R. PALMER

We are pleased to be here today to comment on the Federal Aviation Administration's (FAA) plans to modernize its air traffic control system. As the Committee requested, I will testify on the adequacy of information supporting FAA's fiscal year (FY) 1988 request for funds to 1) award the Advanced Automation System (AAS) acquisition contract and 2) continue the New York Terminal Radar Approach Control (NY TRACON) expansion program.

In December 1985, the conference report of the Appropriations Committees directed FAA to provide the Congress with complete results of an independent benefit/cost analysis, technical risk assessment, and cost estimate before requesting acquisition phase funds. FAA plans to complete these analyses in December 1987. This year the agency is asking the Congress to appropriate initial funds for the AAS acquisition contract. However, an FAA schedule analysis indicates that its plan to award the AAS contract in June 1988 (FY 1988) is optimistic, and an October 1988 (FY 1989) award is more likely. The results of the benefit/cost analysis and technical risk assessment should assist the Congress to make a more informed decision about this $4.6 billion expenditure.

I will now summarize the AAS program and discuss the adequacy of the information supporting FAA's FY 1988 request for funds to award the AAS acquisition contract. Then I will briefly discuss the NY TRACON program.

AAS PROGRAM DESCRIPTION

FAA plans that AAS will replace the hardware, software, and air traffic controller workstations at airport tower, terminal area, and en-route air traffic control facilities. AAS also will include development of advanced automation functions called AERA. AERA functions will use sophisticated software to predict the position of airborne aircraft in en-route airspace, check for potential conflicts, and provide controllers with alternative solutions to potential conflicts. According to FAA, AAS should provide significant benefits to FAA, the airlines, and passengers by 1) increasing controller productivity and system availability, 2) saving fuel and passenger time, 3) automating many functions now performed by controllers, 4) reducing operating costs, and 5) enabling consolidation of en-route and terminal facilities. FAA plans to implement AAS through a phased procurement and deployment over at least the next 12 years. Total acquisition costs are estimated at $4.6 billion--up from last year's $3.2 billion estimate.

Information to support an acquisition decision

During the next several months the Congress will consider FAA's request for $180 million to complete the AAS design phase, develop a test facility, and begin buying AAS hardware and software. In past reports and communications with FAA, the House and Senate Appropriations Committees have indicated that such a commitment should be supported by sufficient information and analyses to ensure that the investment is sound and that AAS is ready to proceed to the acquisition phase. However, FAA has yet to complete several analyses, some requested by the Committees. These include:

1. Plans and reports about the acquisition strategy, which should describe how FAA will mitigate risks, test AAS, and develop advanced functions. Your Committee requested these by May 1, 1987. FAA now estimates they will be completed by the end of May.

2. The final benefit/cost analysis, which is needed to validate requirements, analyze all feasible alternatives,

and certify that the most cost-effective alternative has been chosen. It is not scheduled for completion until December 1987.

3. The request for proposals, the terminal-area facility study, and the final technical risk assessment, which will also become available this year. FAA plans to complete the first two in August 1987 and the third in December 1987.

I will now discuss in greater detail FAA's acquisition strategy, its economic justification, and the other information that is needed.

FAA's acquisition strategy for AAS

We testified to the House Appropriations Transportation Subcommittee last year that FAA's strategy to award the contract before system testing entailed unacceptably high risks that could lead to significant cost increases, schedule delays, and performance deficiencies. As we proposed, both the House and Senate Appropriations Committees directed FAA to incorporate a development and test phase before awarding the contract and to simulate the operational suitability and benefits of the advanced automation functions.

Although FAA revised its acquisition strategy, both Appropriations Committees recently stated that the revisions did not fully resolve their concerns. The new strategy (1) did not provide for adequate hardware and software performance information before the contract award and (2) did not require adequate controller workstation testing or AAS hardware and software testing before authorizing workstation production. It also did not call for simulating the advanced automation functions before contract award. As a result, both Committees directed FAA to further change its strategy to:

-- reduce risks by demonstrating specific technologies, including the local communications network, software compilers, time-critical software functions, and fault detection and recovery mechanisms;

-- conduct full operational tests on the controller workstation and test it with critical AAS hardware and software before authorizing its production; and

-- review the need to simulate AERA's advanced automation functions.

We note that FAA's recent preliminary technical risk assessment confirms that developing the advanced automation functions involves significant risks, and that the feasibility of these functions has not been established through prototype testing and evaluation. FAA plans to report to the Committees about how it will comply with these directions by May 30, 1987.

Economic justification information

In last year's testimony we also raised questions about whether the system, as currently defined, is an economically sound investment. We found that benefits might not exceed costs and questioned the significance of the small increments of passenger time savings that were used, in large part, to justify the investment. A December 1985 Appropriations Committees' Conference report had already directed FAA to conduct an independent benefit/cost analysis to support its request to buy AAS. We were given preliminary results from the first phase of this analysis. FAA plans to use these preliminary results to support its FY 1988 appropriations request. Final results, expected in December 1987, will be used to support a request that the Department of Transportation approve the acquisition phase contract award. Based on a cursory evaluation of the preliminary results, we are still concerned that the analysis relies heavily on passenger time savings benefits and may not have considered all feasible alternatives.

About half of AAS' total benefits come from assigning value to passenger time savings. Seventy five percent of these savings (38 percent of total benefits) are related to time savings of several minutes or less per flight. In effect, FAA obtained the large total benefit by accumulating all the minutes expected to be saved by millions of passengers over many years and assigning them a value of $25 an hour--the assumed value of time to all airline passengers. We question whether these small increments should be valued, and valued at $25 per hour. Last year we also noted that the Office of Management and Budget raised similar concerns. Further, the bulk of passenger time, fuel, and airline operating cost savings rely on the advanced automation functions which, as we pointed out earlier, involve significant risks. Thus, obtaining expected AAS benefits depends on successfully implementing these advanced functions.

The Appropriations Committees' Conference report required FAA to clearly identify its objectives and to analyze all feasible ways to achieve each objective. The Appropriations Committees recently reminded FAA that it should (1) provide the completed benefit/cost analysis justifying the overall investment, (2) validate AAS requirements, and (3) certify that other more cost-effective alternatives cannot satisfy requirements before requesting acquisition funds. Although the AAS program office has reviewed some AAS requirements, the benefit/cost study did not validate AAS requirements.

Further, in the preliminary benefit/cost analysis, only alternatives based on the currently defined AAS incorporate the advanced automation functions. These functions provide the bulk of AAS' expected benefits. The study points out that the alternatives FAA considered are only examples, or benchmarks, among a range of possibilities.

The final phase of the benefit/cost study will refine FAA's benefit estimates, including the benefits expected from AERA's advanced automation functions. This phase offers the opportunity to explore other, and perhaps more cost-effective, alternatives to perform these functions. A final benefit/cost report, now scheduled to be completed this December, could provide a better basis for the Congress to evaluate the program and to make a more informed decision regarding appropriations for acquiring the AAS.

Other information needed

Other information that could be important to the Congress' decision about the AAS investment will also become available during this year. For one, the AAS request for proposals, expected in August 1987, should provide a detailed description of AAS' proposed requirements and contract terms. For another, the results of a terminal area computer capacity and sustainability study are also expected in August 1987. This study should provide information about the need to replace or upgrade computers at the busier terminal area facilities. Finally, the technical risk assessment should be available by December. The results should provide more information about technical, operational, and transition risks that could affect AAS requirements and expected benefits.

Impact of deferring acquisition phase approval

An analysis of schedule risks, conducted by an FAA support contractor, shows that FAA has only about a 20 percent chance of awarding the AAS acquisition contract as planned in June 1988. A high confidence schedule--providing an 80 percent chance--would call for an October 1988 award date. An October award would occur at the beginning of fiscal year 1989, giving the Congress time to evaluate additional information in the spring of 1988 when it considers the 1989 budget request.

I will now discuss the NY TRACON program.

NEW YORK TERMINAL RADAR APPROACH CONTROL PROGRAM

At your request, we did a limited check on the status of FAA's program to expand computer capacity at the NY TRACON facility. We reviewed program documents and discussed program status with cognizant FAA officials.

Terminal area air traffic control requirements in the busy New York City area are met by the NY TRACON. According to FAA, the system is operating at the maximum hardware design limit. FAA justified an expansion program on the basis that a critical need existed to provide additional computer capacity to meet the air traffic demands projected for this summer. On March 14, 1986, FAA awarded a contract to acquire hardware and software to gain the additional computer capacity. Implementation is scheduled in two stages. In the first stage, new controller workstations to provide display processing capability were scheduled to be operational in June 1987. In the second stage, additional computer capacity to perform aircraft tracking and other functions was to be operational in September 1988. The program, however, has encountered significant cost increases and schedule delays.

For the last 3 years, FAA has requested funds for the NY TRACON, each year indicating that no additional funds would be required. In FY 1986, FAA requested $31.4 million to fund total program costs. In FY 1987, FAA's request for $15 million to complete the program stated that additional funds were required to cover increased costs associated with the time-compressed schedule and refined system requirements. For FY 1988, FAA is requesting an additional $22 million. However, the information provided to the Congress to justify the FY 1988 request is unchanged from the FY 1987 justification and does not explain specifically why additional funds are needed. For example, according to FAA officials and internal documents, the FY 1988 appropriation is to fund a contract cost overrun, and that $13.9 million will be needed in FY 1989. These sources also indicate that total project costs are now estimated to be about $90 million.

During appropriations hearings in the spring of 1986, FAA officials assured both the House and Senate Appropriations Subcommittees that its acquisition strategy for the NY TRACON minimized risks. However, FAA determined that the initial design information the contractor provided in March 1986 was unsatisfactory and rejected it. According to FAA officials, attempts to correct the problems are continuing and have resulted in the sizable contract overrun and deployment delays. FAA's documents indicate that the new controller displays will not become fully operational until October 1988, and the program will not be completed until December 1989. FAA officials told us they are attempting to accelerate deployment of some components to provide enough additional computer capacity to handle predicted summer 1988 traffic. Overall, total program costs are now expected to be about three times higher than originally estimated to the Congress. If no further delays are encountered, the program will be completed about 5 to 7 years before it is scheduled to be replaced by the AAS.

SUMMARY

To summarize, FAA is requesting funds to begin buying the AAS, but important studies are not yet complete and will not be finished before the Congress completes its consideration of FAA's FY 1988 appropriation request. Although FAA has been requesting additional funds each year for the NY TRACON, the budget justification does not fully explain the causes for the schedule delays and cost increases. We believe, and have previously testified, that agency management and the Congress must have reliable information to make informed decisions on spending priorities regarding initiating, continuing, and modifying programs.

STATEMENT OF SENATOR KASTEN

Senator LAUTENBERG. I neglected before to make mention of the fact that our colleague from Wisconsin is here. Senator Kasten, did you want to make a statement?

Senator KASTEN. Mr. Chairman, thank you. I do have a statement that I would like to have included in the record. I have had the opportunity of working with the gentlemen from GAO in the past. I just appreciate the work that they are doing and the effort that they are making along with all of us, to provide us with the information which we need to make some of these important decisions.

Thank you, Mr. Chairman.

Senator LAUTENBERG. I know of your interest in aviation and transportation generally, and we appreciate your being here, Senator Kasten.

What we hear today, to me, is somewhat alarming because what we heard yesterday suggested that we had some problems in the operating side of FAA.

Today we hear concerns about the investments we are making in that in some cases it appears we may not get the kind of value that we would like to see, and also about the decisionmaking process for moving these projects along.

Everyone knows that air traffic has continued to build. I think that is good for the country. To me, air service is the one thing that has enabled us to have regional growth around our country. We can see areas developed that otherwise would be left out of the economic move.

It is obvious that the technology that is required has to be stepped up, brought up considerably in order to make the system function. I was interested in some of the comments that you made, Mr. McLure. We will touch on those as we go through the questions about whether or not the funding has been there.

I think that you said at one point there is no indication that there has been a shortage of funds to get these projects underway. Is that correct?

Mr. MCLURE. That is correct.

FUNDING OF FAA PROJECTS

Senator LAUTENBERG. In some cases, would it be fair to say that we have actually put forward too much money at too rapid a pace? I am not here to punish FAA. I am here to protect the American taxpayers.

I know how complicated it is to put major systems together. I came out of the computer business. It is a complex and very dynamic role that we are trying to satisfy here.

Have you seen situations in your review where the money has been there but the projects have not been anticipated thoughtfully enough? Is enough testing, simulation, model development being done to assure that the funds that have been expended are returning the kind of cost benefit that we would like?

Mr. MCLURE. I think your observations about the complexity of the overall procurement are well taken. I think FAA did not anticipate how difficult it was going to be originally, and now finds themselves in the situation they are in because they thought it was going to be simpler than it turned out to be.

I think there are indications that they have wound up purchasing hardware that they have not been able to use because they have not been able to bring the software along.

I think that reflects their wish to move quickly, and I'm not sure it really indicates excess funds will be used unless it turns out that the software won't work with the hardware they purchased.

We are not predicting that that will happen, but coming out of the computer business I am sure you know how difficult it is sometimes to solve some of the complex problems that FAA has to deal with in software types of solutions.

I think that in terms of the funding, although appropriations have not matched authorization, we have not seen any indication that any program has suffered particularly because of money.

The difficulty with the plan has been the technical complexity and the difficulty of getting things to work. In terms of the procurement process itself, FAA got themselves into development and production contracts at the same time. That is also, in my judgment, causing them some difficulties.

AAS ALTERNATIVES

Senator LAUTENBERG. Dr. Palmer, the committee is requiring FAA to do a comprehensive cost-benefit analysis of AAS and the possible alternatives before providing funding for an acquisition contract.

Are there any other feasible alternatives that FAA ought to be looking at and evaluating in the final cost-benefit analysis that they have not done?

Dr. PALMER. We have informally suggested some other alternatives that FAA did not review in its cost benefit analysis. One, for example, would be a much simpler AAS system that has the potential to perform the primary AERA functions.

Such a system could incorporate some centralized and some distributed functions—much like the present AAS design—with redesigned NAS software.

It could also be a more economical AAS that perhaps eliminated or simplified the color requirement and provided a separate simpler display for the flight plan information.

FAA could also consider the alternative of phasing, or evolution, of the availability requirement more in line with their increased dependence on the automated functions.

We also believe that there is a possible simplification in terms of consolidating the terminal area facilities into the area control facilities, and that maybe the best alternatives have not yet been looked at in that area.

AAS RISK MITIGATION

Senator LAUTENBERG. I have been concerned, as you know, about the concurrent development and production strategy that is proposed by FAA for the AAS system.

We have asked them to develop a risk mitigation plan for a revised acquisition strategy. What should we include to be sure that we are avoiding as much risk as possible as we award these contracts?

Dr. PALMER. I think the two best sources of good technical risk information would be the independent technical risk analysis that is being performed and the studies made by the AAS technical assistance group that identified risks and suggested ways to mitigate them.

Based on this information then, I think the FAA could develop a good plan for mitigating risks over the entire course of the AAS acquisition.

We are also concerned, as you are sir, on the transition risks, and that they have not been fully identified or dealt with. They could have serious impact on the system implementation.

There are also potential schedule risks that need to be mitigated, with respect to systems that depend on AAS, or AAS is dependent upon, and the risk of nonsustainability of the computers in the air traffic terminal areas.

Senator LAUTENBERG. What is the biggest risk as you see it with allowing concurrency of the development and production processes?

Is it financial? What are we potentially letting ourselves in for?

Dr. PALMER. Quite possibly serious financial and time delay in getting the results that you want—if we commit prematurely to the production contract on the complex terminals, the sector suite consoles, that are supposed to be the work stations for the air traffic controllers.

Also, FAA has not resolved many problems for both the system architecture and the software, particularly with the AAS advanced features. You run the risk of the sector suites being well down the line on a production run and not having reliable software that works well with those work stations.

Senator LAUTENBERG. Lack of compatibility or the inability of the system to perform and to grow as the dynamic situation requires; all of these things, I believe, Dr. Palmer, could not only send us down the primrose path but have us throwing a lot of money away for which there is little or no recovery.

Is that a fair statement, or am I exaggerating the possibilities?

Dr. PALMER. That is a fair statement, in my opinion.

Senator LAUTENBERG. Even though we can never achieve a perfect environment for this kind of complicated planning, certainly we ought to be at least testing or modeling so that we substantially reduce the risk before we let these contracts.

Dr. PALMER. Yes, sir.

CRITICAL PHASE OF NAS PLAN

Senator LAUTENBERG. Mr. McLure, you said that the NAS plan is entering a critical phase when the hardware and software begins to be delivered to the field sites.

FAA is going to have to install and integrate more than 1,000 units. They are going to have to interface between the various systems, the components that comprise the plan.

Based on your work, does GAO have concerns about FAA's approach to managing the installation and the integration processes.

I think you said it, but I want to highlight this in the record. If you have any concerns, objections or recommendations to make, I would like to hear them.

Mr. McLURE. It is a similar situation where they are trying to do things before they really know for sure what they are trying to do.

Art Shantz is doing our direct work on that, and I would like for him to respond to that if he would.

Mr. SHANTZ. I think the problem here is essentially using three different types of contracts. The system integration contract of Martin Marietta, FAA regional contracts, and the technical support services contract, which is yet to be let.

Senator LAUTENBERG. What are we looking at in the technical services contract. Are we talking about software development? Are these basic systems?

Mr. SHANTZ. Essentially planning functions, site specific, regionwide planning, integrating and interfacing of the delivery of these myriad projects and schedules.

Senator LAUTENBERG. But, is that the integration?

Mr. SHANTZ. The design integration work is being done by Martin Marietta. The disconnect in this process is that FAA is already receiving delivery of these systems.

Senator LAUTENBERG. Which systems would they be?

NAS PROJECTS DELIVERED

Mr. SHANTZ. For example, they have already received delivery of their automated flight service stations. They were received this year.

Senator LAUTENBERG. In plain terms if we might, Mr. Shantz, what have they taken delivery of?

Mr. SHANTZ. The model 1 of the automated flight service station.

Senator LAUTENBERG. Which is?

Mr. SHANTZ. There are to be 37 of these facilities, and they are to consolidate the existing flight service stations and automate the flight specialist functions so that he or she can perform more effectively over a larger service area.

The problem in that specific case is that the systems are delivered. The interfaces of those systems with the terminal control facilities and the area control facilities are only tenuously designed as yet. None of the hardware necessary to make those connections are in the flight service station automation program.

Similarly, the automated flight service station now does not connect with the existing voice response system, which was to be another labor saving program to reduce the demands on the flight service station specialist.

That is an integral program. The design work does not exist. The system is being installed, and is in large part, in place. The ASR–9 radar is another project going in this year. It has never received integration testing at the tech center. It is to go in this year. The technical service support contract will not take effect for another year. What happens to the planning function in the interval.

You are going to begin construction for the ASR–9 according to what design. Martin Marietta has said some 1,850 staff-years of site specific architecture and engineering work need to be done for the design. That is not presently incorporated in the $900 million estimate of the SEIC contract.

Senator LAUTENBERG. So, the project coordinator says that 1,850 man-years are needed to appropriately or properly design this system. Equipment is coming in. Is there a possibility that maybe that equipment can never work with a totally integrated system?

Mr. SHANTZ. I do not want to suggest that it is going to be rusting in the fields. It will work. It might not work precisely as planned or designed and the complete benefit might not be realized.

Senator LAUTENBERG. It could prevent us from getting the efficiencies that we need, prevent us from ever being able to handle the traffic volume in as automated a fashion as possible.

We are talking about the possible, are we not?

Mr. SHANTZ. That is correct, sir. I think it is more likely that there will be delays in fully realizing the integrated benefits of all of these systems. It is going to take considerably longer than is anticipated.

It is the same story with respect to the original NAS plan. How long does it take to do this? They estimate this amount of time. There are sufficient cracks now, so that that estimate is going to be considerably longer than anticipated.

TIME AND PERFORMANCE TRADEOFFS

Senator LAUTENBERG. In being fair to FAA, because again, we do have a very complicated world out there that we are looking at, have they reduced the time necessary to get us into the functioning system that we need by going ahead and issuing some of these production contracts?

Or, in your view, is it impossible to ever have anticipated enough that a further delay would have been appropriate?

You are in the technical side of things.

Mr. SHANTZ. There is a tradeoff, obviously, in not thoroughly integrating the design of these systems, in going to the field on the production contracts for major systems that were originally excluded from Martin Marietta's responsibility.

They can receive an immediate benefit from those systems that are installed. They are unlikely to receive the full benefit at the places that they are most needed.

In the case of the radar, for example, you could install the radar where it might have relatively few interfaces and it could function and you derive the benefit.

In a more complex setting where it must interface with a variety of things, it is unlikely that the full benefit of that radar would be realized.

NAS PLAN DELAYS

Senator LAUTENBERG. Your responsibility as an agency is to evaluate this qualitatively as well as quantitatively. Mr. McLure, did FAA plunge in where angels fear to tread here?

I mean, have they just gone ahead? Again, we are not looking essentially for condemnation here.

What we are looking for is a way to move this thing along the efficient and most cost-effective way that we can do it. In your judgment, has FAA plunged into this thing headlong, making decisions about equipment purchase and installation? I know very well what Mr. Shantz was talking about.

That is, that you can get some regional or local benefit with a given piece of equipment. The introduction of a technology would ultimately shift into a totally integrated plan. Ideally, what we would like to have is an automated system. That is not going to happen.

The closer we get to that, the better off that all of us are going to be from the safety and delay standpoints. We are talking eventually about MLS/ILS systems. We are talking about an automated approach to landings and takeoffs in almost, hopefully, zero visibility conditions. If we can get all of that stuff moving and control the flow traffic in the skies, we will have achieved the possible, I think, in current technology.

I am not an expert but I know enough about the dangers. Have we, in your judgment, made equipment purchase decisions prematurely because we did not have the total plan developed, tested, and simulated in a way that we know we have a pretty good chance to make a success of it?

Mr. MCLURE. Charlie needs to add to what I am going to say, and I have a feeling that he will be a lot more direct.

Senator LAUTENBERG. He may. This is an open session.

Mr. MCLURE. I did want to say that I thought you expressed very well, the dilemma that FAA has been experiencing. FAA was very optimistic originally and we do not know why or how that happened.

They thought they were going to be able to do something and it turned out that they could not do it.

We do not mean to imply that they have thoughtlessly gone ahead with that since then, although there are some areas where these things——

Senator LAUTENBERG. Precipitously, perhaps, but never thoughtless.

Mr. McLURE. We think that there are areas where they have gone harder and farther than they needed to, given the situation. I cannot really explain to you why that has been the case.

Part of it is, I think, that there are thousands of people involved in this. They see their careers as being tied to accomplishment of this schedule. There are folks in this town who are hounding FAA to get this thing done as fast as possible. They don't care what it is, get it done because of the——

Senator LAUTENBERG. Let us show some progress, even though that progress may not get us closer in serious terms to——

Mr. McLURE. I think all of those things affect what the agency does. I would also like to say that I think the people who I deal with at FAA are trying to be as careful and reasonable as they can be in the demanding context of what they are trying to do and the pressures that they are under.

Now, I would like to ask Charlie to go ahead.

Senator LAUTENBERG. Charlie, go ahead.

Mr. COTTON. I am not likely to say what I was originally going to say. [Laughter.]

Senator LAUTENBERG. Please do. There is no recrimination from me for another year.

NAS PLAN ENTERING CRITICAL PHASE

Mr. COTTON. We have now what FAA calls a midterm adjustment. The NAS plan, as a whole has come to the point where individual systems, individual pieces of equipment, are going to start to be delivered to the field.

The problems that we have identified to date have been system specific. There has been problems with developing the MLS, developing the AAS, roughly 100 systems. We are concerned that——

Senator LAUTENBERG. What kind of systems are they? What is going to be delivered, what specifically.

Mr. COTTON. For example, the ASR–9 is going to be delivered. The host is being delivered.

Senator LAUTENBERG. How much is that, the ASR–9.

Mr. SHANTZ. How big is it?

Senator LAUTENBERG. How much is the cost?

Mr. SHANTZ. About $500 million.

Mr. COTTON. Our concern is that if they were optimistic in developing individual systems, roughly 100 individual systems and they carried that optimism over to this integration phase to this deployment phase where they have to have these 1,000 interfaces, then the delays that you have experienced to date will pale in a comparison to future delays.

What we are going to deal with is how FAA can best address this issue. You have a renewal of the SEIC contract in January 1989 and FAA has not yet awarded the TSSC contract. And the regions have not started to build all of the pieces of equipment and facilities.

Now is the time to get this thing into a sequential order that makes sense and mitigates risk.

Senator LAUTENBERG. I saw your response, Mr. Shantz, do you always poke him when he is talking. I do not know whether that is good, bad or otherwise.

I am awfully curious about what was intended in that. Do you want to comment on that?

Mr. SHANTZ. Along that same line, the SEI contract, the technical service contract, and the construction contracts imply a logical sequence: design, planning and management, and construction.

Our concern is that sequence may not be implemented in the present time. As a result, you have projects that from an engineering point of view are logically related but, because there have been delays, so that all of the families are not going to the field at the same time.

What does an engineer do, for example, if they have half of the project, some hardware but not the software. What happens to the hardware, where does it go.

This is not unlike what we have experienced with the flight service stations, where they purchased the hardware and could not use it until just the last year or so.

SATELLITE-BASED TECHNOLOGY

Senator LAUTENBERG. The compatibility issue again, drawing on my business experience, is one that is going to determine how successful or efficient this whole system is going to be later on. Each one of these projects may be able to function somewhat by itself but that is not the kind of thing we are looking at in terms of what the plan is or what the scope of the spending is likely to be.

If the sequence is out of phase or if the steps are out of sequence, there is not a lot of value to it. We ought not be ordering equipment that may not harmonize with the system plan. This could ultimately result in a lot of money being thrown away and ultimately, my guess, cause us not to be able to meet the need that we have.

Looking at the potential of satellite technology for air traffic control and based on your evaluation of the potential use, do you see anything in the near term that could make it available to be used in our lifetime?

Dr. PALMER. Well, I believe, as we stated in testimony last year before the House Science, Space, and Technology Committee, that most of the technology necessary to move toward satellite-based communication, navigation functions, and surveillance functions, will be available by the midnineties.

However, we noted that the limited investment that is being made right now in research and development for satellite-based communications, navigation, and surveillance may delay FAA's ability to use this technology when it becomes available.

In addition, unless the major NAS plan systems are designed to be compatible with or extensible to satellite-based technologies, implementation of these technologies could be both difficult and time consuming.

We have been suggesting, and emphasized in our testimony last year, is that FAA reassess the potential for satellites in order to begin their integration into the NAS plan programs.

NAS PLAN PRODUCTIVITY GAINS

Senator LAUTENBERG. Mr. McLure, you mentioned that the promised benefits of the NAS plan are associated with productivity improvements and reductions in personnel.

In light of your testimony yesterday about the need for additional air traffic control maintenance personnel in the foreseeable future, and the problems confronting us right now, do you consider with FAA's claim for increased productivity, personnel benefits, to be realistic?

Mr. MCLURE. I would like to try to answer that last question and answer this one, too.

The brief answer is, not entirely. To date we have focused primarily on the implications of these promised productivity gains being pushed further and further out into the future.

Recently, though, there has been some concern and some attention focused on whether or not that productivity will ever be delivered.

These are two different issues. One is delays in promised productivity. The other is a question of whether or not that productivity will ever be delivered.

Senator LAUTENBERG. Why do you say that? If the system gets delivered, if NAS eventually gets put into place, why would the productivity gains be delayed?

Mr. COTTON. If the advanced automation system and, in particular, the subsystem of the project which is called AERA III, delivers its productivity gains as promised, then you will not need as many controllers to control the level of air traffic activity at that time than you would need without it.

And the problem there is that that subsystem or project is being pushed out to the late 1990's at the earliest. And that is the issue that we have focused on, and the implications of that on the controller work force for the next 10 or 15 years.

Senator LAUTENBERG. How about the manual interface as these systems get installed; the backup redundancy with the manual response if something goes awry? I mean, we are going to need a pretty good sized force. We are going to need people around who have experience who are going to be able to be responsible. Am I right or exaggerating?

Mr. COTTON. That is an issue that has recently been raised by air traffic within FAA. And they expressed two concerns, the first being that they take exception to most of the productivity gains identified by Martin Marietta for the air traffic controller work force. They take exception to over 17,000 staff-years in position savings.

Senator LAUTENBERG. They take exception to the proposal that there will be these productivity gains?

Mr. COTTON. Correct. They have also identified what you addressed here, that there will be periods of time in which you are going to have to run both systems until you can assure yourself that your new system reaches reliability standards, your operational requirements.

And essentially, their conclusion was that, in the foreseeable future, they will require yearly increases in the number of air traffic controllers.

Now, if that assumption is correct, then that eliminates much of the productivity gains, at least to the year 2000, that have been factored into the current NAS plan benefit-cost ratio.

Senator LAUTENBERG. Thanks very much. I want to close out this section. The FAA is requesting almost $3 million to put aviation weather observation systems at locations staffed with weather specialists.

This request is contrary to a GAO position that the system ought not be installed at those locations until the system totally meets FAA's operational requirements.

You talked about some contracting out in weather forecasting. Was that considered in your evaluation?

Mr. MCLURE. The contract does meet the safety requirements for weather observations. The $2.7 million they are asking for is to develop a system that will be as good as the personal observation of the person that FAA contracted out to.

We just think that they ought to be sure that the automated system would do that before they stop using the current one.

Senator LAUTENBERG. Very interesting. I visited the tower in Newark, and you have heard me say I visited other towers around the area. And the rainfall indicator is an old bucket that sits out on the roof. And one of the controllers said, they had not discovered anything better.

I guess it is reasonable. The bucket is getting a little rusty, we may have to get a new one. But this committee, I think, can handle that without going to the full Senate.

In any event, we are pleased to have you here. Thanks very much. If you will stand by just in case I have a question, I would appreciate that.

Now, I will excuse you, and ask Admiral Engen and his group to come to the table.

BRIEF RECESS

Senator LAUTENBERG. We are going to recess for just a couple of minutes. I have to just check in with another committee. It will just be a couple of minutes.

[A brief recess was taken.]

SUBMITTED QUESTIONS

[The following questions were not asked at the hearing but were submitted for response for the record:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

MEASURING AVIATION SAFETY

SENATOR LAUTENBERG: You said in your statement that FAA does not have effective measures of how well it is maintaining aviation safety, and that better measures may help us judge whether FAA is able to do its job well with the resources it has. If we settled on what measures would be useful, would they help us this year?

ANSWER: We believe it is important that measures be agreed to and data gathered to track FAA's efforts in accomplishing its goals. This should take place as soon as possible so that FAA can begin to baseline its performance and measure progress. While this effort should start now, we believe the sensitivity of defining what an adequate safety measure is requires consensus building between FAA, the Congress, and other parties, such as the National Transportation Safety Board. This collaborative effort deserves sufficient time to develop. We would doubt, therefore, that measures could be identified and sufficient data collected for policy decisions this year. In addition, the measures wil be most useful after they are collected over several years to show trends rather than absolute measures of safety.

DEFINITION OF THE CONTROLLER WORKFORCE

SENATOR LAUTENBERG: Last August, GAO testified before the House Public Works Committee that the way FAA defines its controller work force needs to be changed. This Committee has expressed its concerns about this matter as well as the accuracy of FAA's reporting on the actual number of fully qualified controllers. Would you summarize your observations in regards to the way FAA defines the controller workforce and the accuracy of its reporting?

ANSWER: FAA's current definition of the controller work force includes people who do not control aircraft and excludes some who do. Using this definition, FAA could meet its controller work force staffing goals without increasing the number of people who actually control traffic. We believe FAA should change the definition so that it applies essentially to only those who are actively engaged in the separation and control of air traffic or are required by FAA to retain currency on positions for which they are certified by spending a part of their time controlling traffic. Hence it would include Full Performance Level controllers, developmental controllers undergoing training at field facilities, and also first line supervisors and traffic management coordinators at field facilities, who spend part of their time controlling traffic. Air traffic assistants (ATA's) who are employed solely for clerical duties at field facilities, persons undergoing initial screening and training at the FAA academy, and those in special programs such as upward mobility would, therefore, no longer be counted as part of the controller work force, but would remain as part of the overall air traffic service work force.

DELAYS IN THE NATIONAL AIRSPACE SYSTEM PLAN

SENATOR LAUTENBERG: Your testimony indicates that FAA's $16 billion NAS Plan to modernize aviation systems and safety is now in its fifth year, but it has experienced scheduling delays totaling 8 years. (The NAS Plan is to be finished by the year 2000). Air traffic continues to grow while FAA has fewer controllers than in 1981 to handle more air traffic within the same air traffic control system. Until the NAS Plan gets back on schedule, and FAA is able to hire an adequate number of full performance level controllers, trained inspectors, and trained maintenance inspectors, do you think FAA should:

-- Continue to overburden controllers, or

-- Limit the quantity of traffic in busy control sectors at peak hours?

ANSWER: We have recommended that FAA may need to limit the quantities of air traffic at the busiest control sectors at their busiest times. In other words, FAA should do more to tailor air traffic to the capabilities of its air traffic controllers.

QUESTIONS SUBMITTED BY SENATOR KASTEN

SAFETY MARGIN IN THE AIRSPACE SYSTEM

SENATOR KASTEN: The FAA feels that although there must be continued improvements throughout the system, that the margin of safety is still acceptable. The GAO apparently feels that although the system is still a safe one the margin of safety is less than it has been in the past. In this area, I am reminded that statistics can often prove just about anything. In looking to establish uniform, constant criteria by which to measure the system I think we are on the right track. But as you look to the future and the needs of the system, consider the programs in place and coming on stream, and take into account the budgetary realities, what is your appraisal of how we will fare in the next couple of years in regard to the margin of safety? Will it continue to slip to perhaps a dangerous level, remain at its present level, or can we expect to see it improve?

ANSWER: Continued improvement of the national airspace system and the level of safety it provides will require the coordinated efforts of both air space users and FAA. During this period of rebuilding its work forces and modernizing air traffic control hardware, FAA needs to recognize the limitations of the present system in meeting ever-increasing air space demands. Correspondingly, air space users need to accept these limitations and be receptive to possible FAA required adjustments in air traffic activity. As new hardware is introduced into the sytem, FAA needs to have the right people, in the right numbers, in place to use and support that equipment. Finally, FAA needs to establish those benchmarks against which it can assess its progress in managing in an environment of ever increasing demand and change.

Currently, the people and the hardware which comprise the air traffic control system are not being replenished at the rate that FAA agrees is needed. As we have reported, three of the critical work forces (controllers, inspectors, and maintenance) will require continued hiring to achieve FAA goals. Questions remain, however, as to the eventual size and composition of these work forces, and, in the case of the maintenance technicians, whether FAA can react quickly enough to avert a major staffing shortage.

While FAA is challenged with rebuilding work forces, its plan to modernize the hardware, which it envisioned as being the answer in providing the capacity to meet the increased demand, will not be on-line in the original time-frame. Because of critical hardware modernization delays, FAA work forces will, therefore, be faced with doing more with older and increasingly less reliable equipment.

MID-AIR COLLISION AVOIDANCE DEVICES

SENATOR KASTEN: The technology in this whole area is mind-boggling, but its implementation is critical to the future operation and safety of the system. I know that the GAO and the FAA are familiar with the serious concerns of Senator Exon, the Government Accountability Project and the Aviation Consumer Action Program regarding the merits of the deployment and development of ACAS and TCAS collision avoidance systems. The GAO discounts the value of the ACAS system and believes the FAA has proceeded appropriately in the development of TCAS which is just now being tested. This whole area concerns me somewhat as well. Could you briefly explain these collision avoidance systems? I have received numerous concerns relative to the cost to be imposed on particularly the general aviation industry given the FAA's plans for the implementation of the TCAS system.

ANSWER: FAA's Traffic Alert and Collision Avoidance System (TCAS) essentially evolved from the research, development and testing done on mid-air collision avoidance since the 1950's, and which included commercial ACAS and subsequent collision avoidance systems. Both today's TCAS and the most promising ACAS in 1976 (Honeywell's Avionic Observation of Intruder Danger System) are designed to operate independently of FAA's ground based Air Traffic Control (ATC) system. Also, both recommend vertical (up or down) collision avoidance maneuvers to the pilot. However, an enhanced TCAS now being developed (TCAS III) will recommend horizontal avoidance maneuvers (left or right) as well.

While independent, TCAS also works cooperatively with the ATC system. As such, in addition to other TCAS units, it can detect and alert its pilot to any nearby aircraft carrying an operating ATC transponder. Provided the transponder also reports altitude, TCAS will recommend an avoidance maneuver. This means that unequipped aircraft, while not protected from one another, are indirectly protected from collision with a TCAS equipped aircraft, as long as they have an operating transponder onboard. The use of altitude reporting transponders by aircraft operating in certain controlled airspace has been required by FAA for a number of years, and in general, transponders with and without altitude reporting are in otherwise widespread use.

TCAS is designed to protect passengers primarily in commercial air carrier and commuter airline aircraft and FAA intends to mandate the use of TCAS by them. Coupled with the requirement that all aircraft carry altitude reporting transponders, only commercial air carrier and commuter aircraft would need to be equipped with TCAS for that system to work.

On the other hand, ACAS cannot work cooperatively with existing ATC transponders and can recognize and avoid only another ACAS equipped aircraft. Therefore, general aviation as well as commercial air carrier and commuter airline aircraft would have to carry ACAS for that system to work.

A less sophisticated TCAS model has been designed for general aviation. Its currently projected per unit costs range from $4,000 to $15,000. While a 1975 per unit cost estimate for a general aviation ACAS ranged from $1,179 to $8,381 depending on the level of performance desired, this estimate is obsolete for several reasons, including the fact that it has not been adjusted for inflation. Also, ACAS tests showed that a number of technical problems would have to be corrected before the system could be considered suitable for use in the national airspace. We are not in a position to judge what the cost impact would be to correct these technical problems or the time that would be required to correct them.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

STATEMENT OF ADMIRAL DONALD D. ENGEN, ADMINISTRATOR

ACCOMPANIED BY:
- EDWIN S. HARRIS, JR., ASSOCIATE ADMINISTRATOR FOR DEVELOPMENT AND LOGISTICS
- MARTIN POZESKY, DEPUTY ASSOCIATE ADMINISTRATOR FOR DEVELOPMENT AND LOGISTICS
- BROOKS GOLDMAN, ASSOCIATE ADMINISTRATOR FOR ADMINISTRATION

INTRODUCTION OF WITNESS

Senator Lautenberg. Welcome again, Admiral Engen, for your—I do not want to say final—last, whatever, appearance before this subcommittee, in your present capacity, as Administrator of the FAA. I want to say again, that if the tone in the review with GAO seemed to be hostile, it is not intended to be. My responsibility is to make certain that the citizens of our country are treated as well as they can when they rely on their air travel, whether that is for goods or people.

And I know you share the same objective. We also share the same objective for our country. And that is to be strong internally as well as externally.

And I commend you and your colleagues at FAA for being conscientious; for trying to work in a very difficult environment, difficulty created by budgetary problems and by the changing nature of government here.

It is very hard to do the kind of planning that we would like to see done in a timely fashion without the constant pressure of election years and budgetary problems and divided opinions.

I know that as I discussed some of the systems problems this morning with the GAO people, I kind of looked back at my days in business and realized how lucky I was that I did not have to listen to Senators or Congressmen or people of that nature challenging every move that I made.

But that is the nature of things. And we share a commitment, I know, Admiral, to making things better. If there have been mistakes in the past, the best thing to do is to cut early enough, take our licking if we have any to take.

That is not intended to be inferential in any way. It is a statement of my own policy.

And therefore, I invite you and your colleagues to present your views on things. And once again, formally, in public, wish you well in the things that you take on in the future. I am sure you will do a good job with them. Your record in the past indicates that you will.

Admiral Engen, please.

STATEMENT OF DONALD D. ENGEN

Admiral ENGEN. Mr. Chairman, thank you very much. And we do indeed share the same ideals.

IMPACT OF SENATE BUDGET RESOLUTION

I would like to open my statement today by stressing the point I made yesterday concerning the impact of the Senate budget resolution on the FAA in fiscal year 1988.

Clearly it would be, as I said yesterday, devastating for the FAA to operate at the levels proposed in the budget resolution. For the operations appropriation, the Senate budget resolution is $300 million below our request, and the reduction for the Facilities and Equipment Appropriation, which we are discussing today, $540 million.

A reduction of this magnitude in our F&E program, at this time, would completely cripple the further development and implementation of our NAS plan, which we are here to discuss this morning.

Now, I recognize that the Senate budget resolution is just that, it is a resolution, and that there are alternatives that could develop in the process.

I have outlined in more detail in the letter that I handed your staff this morning, sir, my concerns about the kinds of actions we would have to take beginning in July of this year to live within the levels of the SBR, which proposes cuts for operations and F&E.

I find it ironic that on the one hand this subcommittee is concerned about what you view as a lack of progress in several areas of responsibility of the FAA, while at the same time, another Senate committee is proposing to strip the FAA of the resources necessary to maintain the air commerce system of this country.

LACK OF SUPPORT FOR THE RADAR TRAINING FACILITY

Additionally, I would also like to express my deep concern at the committee's withdrawal of the support in the fiscal year 1987 supplemental for the radar training facility enhancement.

This training program is designed to improve our ability to meet our full-performance-level goals. Merely adding controllers and increasing those numbers, while reducing training, will not achieve the operational goal that we need.

NAS PLAN PROGRESS AND ACCOMPLISHMENTS

Now, returning to the F&E appropriation, which is the subject of this morning's hearing, I will briefly outline the progress we have made to date.

Five years into the NAS plan, 14 percent of the projects are nearly complete. Over 75 percent of all major NAS plan projects are under contract, and over 4,400 individual equipment components have already been delivered to the field.

By the end of this fiscal year, more than 90 percent of the NAS plan programs will be underway.

Key among our accomplishments this fiscal year will be the delivery of the host computer system to 15 of our en route air traffic control centers. Six have already been delivered.

These deliveries, which started in Seattle in November, last year, should be completed in December of this year. The Seattle Host system became operational this past weekend, and is already handling traffic at that center.

This system will increase the capacity of today's computers by at least 4 times, and the processing speed time will be increased by 10.

The solid state components will significantly improve system reliability and eliminate maintenance problems we find with the present outdated and overworked equipment.

Field testing is progressing at all the other sites, and no major problems have been encountered to date.

We have achieved a variety of additional NAS plan accomplishments, including the award of a contract for additional terminal radars; the issuance of a contract award for airport surface detection equipment radar to improve ground surveillance at airports; the delivery and commissioning of additional model 1 systems in the flight service station automation program, with some 28 AFSS's now commissioned for operational use; and the commencement of deliveries of distance measuring equipment antennas, at the rate of 20 per month; and finally, a contract award for some 60 additional microwave landing systems.

Management, technical, and budgetary challenges abound. We work daily addressing the planning and implementation of the NAS.

That plan is at a critical juncture in its development. During the last year, we subjected all of the NAS plan projects to a very careful review of their schedules and costs. Our latest timetables use a more conservative engineering estimate of the expected schedule performance than we had used in the past.

Achieving full funding levels for the NAS plan is critical at this time. In many programs we are in the production phase right now.

Any funding shortfalls, such as those contemplated in the Senate budget resolution, will therefore translate directly into serious schedule delivery delays.

We are past the point where we can effectively manage our way around funding shortfalls.

Our requested Facilities and Equipment Appropriation, which is some $1.35 billion, is as you have said, 68 percent higher than our fiscal year 1987 appropriation, because we are entering this production phase of the NAS plan.

I cannot stress too strongly the importance of achieving this level of funding. Funding shortfalls now will significantly impair our ability to achieve in a timely way the safety and efficiency benefits that we seek in the NAS plan.

The traveling public, which is providing the funds for the implementation of the NAS plan, is demanding that we make good on our longstanding promises to improve the system.

GRANTS IN AID TO AIRPORTS

In this regard, we are also seeking contract authority of $1.017 billion for the Grants in Aid to Airports Program we have proposed for enactment by Congress.

Our legislative proposal targets more funds toward airport capacity, and provides for an expanded state role in airport grant administration.

RE&D PROGRAMS

Our budget proposes $150 million to fund research, engineering and development programs. It is imperative that we recognize that the NAS plan does not mark the end of our efforts to improve the system.

We must always strive to achieve greater levels of safety and efficiency. Work remains to be done, for example, in improving our weapons and explosive detection capabilities, and in expanding our knowledge of severe weather phenomena.

A well-conceived, adequately funded, and properly executed RE&D, is vital for enabling us to meet the aviation safety needs of the future.

ANALYSIS OF GAO REPORT

Before closing, let me make a few comments about the GAO report which was released on Wednesday, and which you and I discussed yesterday.

My staff is still analyzing that report, and we will be responding more fully at a later date. But let me say that we have already come across a number of what we feel are errors in the report.

For example, the report, and the chart which was displayed yesterday, showed the percentage of time in which firstline supervisors actually control traffic at various en route centers.

The chart showed, for example, at the Los Angeles center, the figure to be 60 percent. In fact, the figure is approximately 25 percent.

The chart showed at New York center, 40 percent; and in fact, since last October firstline supervisors have been controlling traffic 20 percent of the time at New York center. That is still more than we want, though.

We will continue to review the GAO report, and we will give you a more complete response at a later date.

FAA PRIDE AND DEDICATION

Finally, and this may well be my last opportunity to speak before this committee, I am very troubled that, for whatever reasons, the world's preeminent civil aviation agency, which is so dedicated to service and safety, is pummelled by the very Congress which it serves.

The FAA is made up of people. And these are very proud people. They serve the aviation public with dedication at all levels. And I know you understand that, sir.

I appreciate the tone of helpful criticism this morning. The things that are said here, though, are not lost on our employees, nor are they lost on our international counterparts.

The last 3 years have been the safest 3 years in U.S. aviation history. There are challenges, but we are dedicated to continuing that record.

In closing, Mr. Chairman, I know that we all have the same goals in aviation, a safe and efficient system. I appreciate your personal support. I hope that my agency can count on that continued support in ensuring that the FAA is provided adequate resources to meet its critical safety functions.

With me today, sir, are two additional people who were not with me yesterday. May I introduce Mr. Donahue, Associate Administrator for Airports; and Mr. Martin Pozesky, who is the NAS plan director.

We would be very pleased, sir, to respond to your questions.

PREPARED STATEMENT

Senator LAUTENBERG. Thank you, Admiral Engen. Without objection your complete statement will be inserted in the record.

[The statement follows:]

STATEMENT OF DONALD D. ENGEN

I would like to open my statement today by stressing the point I made yesterday concerning the impact of the Senate Budget Resolution on the FAA in FY 1988. Clearly, it would be devastating for the FAA to operate at the levels proposed in the Budget Resolution. For the Operations Appropriation, the Senate Budget Resolution is $300 million below our request. The reduction for the Facilities and Equipment Appropriation is even greater, $540 million. A reduction of this magnitude in the F&E program at this time would completely cripple the further development and implementation of the NAS Plan, which we are here to discuss this morning.

I have outlined in more detail in the letter I handed you this morning my concerns about the kinds of actions we would have to take, beginning in July of this year, to live within the levels the Senate Budget Resolution proposes for Operations and F&E. I find it ironic that on one hand this Subcommittee is concerned about what you view as lack of progress in several areas of responsibility of the FAA while at the same time another Senate Committee is proposing to strip the FAA of the resources necessary to maintain the air commerce system in this country. Additionally, I would also like to express my deep concern at the Committee's withdrawal of support in the FY 1987 Supplemental for the Radar Training Facility enhancement. This training program is designed to improve our ability to meet our full performance level goals. Merely adding controller numbers while reducing training does not achieve an operational goal.

Returning to the F&E Appropriation, which is the subject of this morning's hearing, I will briefly outline the progress we have made to date. Five years into the National Airspace System Plan, fourteen percent of the projects are nearly complete. Over 75 percent of all major NAS Plan projects are under contract, and over 4,400 individual equipment components have already been delivered to the field. By the end of this fiscal year, more than 90 percent of the NAS Plan programs will be underway.

Key among our accomplishments this fiscal year will be the delivery of Host computer systems to 15 of our air route traffic control centers; six have already been delivered. These deliveries, which started in Seattle in November 1986, should be completed in December of this year.

The Seattle Host system became operational this past weekend and is already handling traffic at that center. This system will increase the capacity of today's computers by at least four times and their processing speed by ten times. Its solid-state components will significantly improve system reliability and eliminate maintenance problems we find with the present outdated equipment. Field testing is progressing at all other sites and no major problems have been encountered.

We have achieved a variety of additional NAS Plan accomplishments including award of a contract for additional terminal radars; issuance of a contract award for airport surface detection equipment radar to improve ground surveillance at airports; the delivery and commissioning of additional Model 1 systems in the flight service station automation program, with 28 AFSS's now commissioned for operational use; the commencement of deliveries of distance measuring equipment (DME) antennas at the rate of 20 per month; and a contract award for 60 additional microwave landing systems.

The NAS Plan is at a critical juncture is its development. During the last year, we subjected all of the NAS Plan projects to a careful review of their schedules and costs. Our latest timetables use a more conservative engineering estimate of expected schedule performance than we had used in the past.

Achieving full funding levels for the NAS Plan is critical at this time. In many programs, we are in the production phase. Any funding shortfalls such as those contemplated in the Senate Budget Resolution will, therefore, translate directly into serious schedule delays. We are past the point where we can effectively manage our way around funding shortfalls.

Our requested Facilities and Equipment Appropriation--$1.35 billion--is 68 percent higher than our Fiscal Year 1987 Appropriation because we are entering this production phase of the NAS Plan. I cannot stress too strongly the importance of achieving this level of funding. Funding shortfalls now will significantly impair our ability to achieve in a timely way the safety and efficiency benefits of the NAS Plan. The traveling public, which is providing the funds for implementation of the NAS Plan, is demanding that we make good on our longstanding promises to improve the system.

In this regard, we are also seeking contract authority of $1.017 bilion for the grants-in-aid to airports program we have proposed for enactment by Congress. Our legislative proposal targets more funds toward airport capacity and provides for an expanded State role in airport grant administration.

Our budget proposes $150 million to fund the Research, Engineering and Development Program. It is imperative that we recognize that the NAS Plan does not mark the end of our efforts to improve the system. We must always strive to achieve greater levels of safety and efficiency. Work remains to be done, for example, in improving our weapons and explosives detection capabilities, and in expanding our knowledge of severe weather phenomena. A well conceived, adequately funded, and properly executed R,E&D program is vital for enabling us to meet the aviation safety needs of the future.

Before closing, let me make a few comments about the GAO report which was released on Wednesday and which you and I discussed yesterday. My staff is still analyzing that report, and we will be responding more fully at a later date. But let me say that we have already come across a number of errors in the report. For example, the report (and the chart which you displayed yesterday) showed the percentage of time in which first-line supervisors actually control traffic at various en route centers. Your chart showed, at the Los Angeles Center, the figure to be 60 percent. In fact, the figure is approximately 25 percent. Your chart showed, at the New York Center, 40 percent. In fact, since last October first-line supervisors have been controlling traffic 20 percent of the time at New York Center. We will continue to review the GAO report and will give you a more complete response at a later date.

Finally, this may well be my last opportunity as Administrator to speak before this Committee. I am very troubled that for whatever reasons the world's preeminent civil aviation agency, which is dedicated to service and safety, is pummelled by the very Congress which it serves. The FAA is made up of people, proud people, who serve the aviation public. They do this with great pride. The things that are said here are not lost on our employees, nor are they lost on our international counterparts. The last three years have been the safest three years in U.S. aviation history. We are dedicated to continuing that record.

In closing, Mr. Chairman, I know that we all have the same goals for aviation--a safe and efficient system for the American flying public. I hope my agency can count on your continued support in assuring that the FAA is provided adequate resources to meet its critical safety functions.

I would be pleased to respond to questions you may have at this time.

FAA RESOURCE REQUESTS

Senator LAUTENBERG. Admiral Engen, we may have a question or two that we would like to put to you. It comes as no surprise.

I feel compelled to respond to your comments. And we appreciate the thought and the concerns that were expressed there, especially toward the end.

You do have a lot of very good people in that agency. I have had a chance to meet some of them. I know they work hard. I know they work under very trying conditions. Pummelling is not my objective. I try to play racketball and work it out that way, or tennis, or run.

But I would have to say this to you. In all fairness, I think that that agency was demoralized by inadequate attention from the administration, from the budgeteers. They got their lumps from the Congress as well.

I think that people who are asked to work with antiquated systems; who are asked to work beyond their physical endurance; are inclined to feel like they are being put upon. I think some of that starts not from this side of the desk, but very frankly, from Pennsylvania Avenue, and perhaps even from some of the decisions that are made at FAA.

There has been a shift in responsibility over the years. There has been enormous growth in the industry. We have now made aviation, as a result of deregulation—and I support deregulation—a mass transit business practically.

All you have to do is visit the airports and see the people today who fly who could not afford to fly before, and the frequency with which they fly. And I think that is very positive.

But I do not think honestly, Admiral, that the agency has kept up, as I view it, with the responsibilities, with the requirements, and I am not talking about contrasted to irresponsibility. I'm talking about as contrasted to the decisionmaking process that goes into development of a very complicated system.

I visited the facility in Pomona. I saw equipment there, and I have been in the computer business almost since its development. I saw the first introduction of the commercial computer technology in 1961, the equipment was 1401 equipment.

I do not know whether any of your staff knows precisely the configurations that exist down in Pomona. Do you still have 1401 equipment in Pomona? No. Early 360 equipment? Plenty of it.

That was vintage 1965. That was a good year for wine. I do not know that it was as good a year for computer technology. It was an important step along the way.

You almost cannot give that kind of computer hardware away anymore, because the maintenance on it is more costly than the value you would be allowed by IRS for a charitable contribution to a university or an institution.

The fact is that your people are being worked very hard. I think in some cases, beyond reasonableness.

I do not think the agency has asked enough of the Congress in the years past. And now as we try to force feed this thing, we are getting a response back. Admiral, in your comments here and yesterday, I think this is probably the most aggressive request for funding that I have seen.

I have been here only 4 years, and I have only served in the transportation-related committees for a couple of those. I should not say that; I have always been involved in the transportation area. But more precisely in these last couple of years since I have served on this appropriations subcommittee.

There has not been the resource requests that I think were concomitant with the responsibilities of the leadership to provide the people with the tools to do the job. And therefore, I conclude that pummelling by the Congress is a relatively small part of this. The congressional aggressiveness is directed, as you know, at the top. That is where the buck is supposed to stop. That is where the abuse comes from. That is, hopefully, where the recognition and the rewards are accredited as well. And I know the people throughout the system listen.

Ask the people at Pomona, where I took the time to visit, whether I show a serious interest in making certain that the resources are there, and making sure that the recognition is there.

You have got a heck of a job at FAA. You have got the lives of our citizens in your hands. You also have a very significant part of the economic development of our country in your hands. And I think that you have got to fight the forces that would deter you from this task. They are not in the Congress; at least not in the present Congress.

QUESTIONS ABOUT GAO DATA

Mr. McLure, are you here?

Mr. McLure. Yes.

Senator Lautenberg. If you would come up to the table for just a moment. I want to ask you whether you heard the Administrator's comments as he responded on page 6 of his statement, to the assertions about the time being spend by supervisors controlling air traffic operations, and the challenge that was raised.

Have you made a mistake? Did GAO make a mistake along the way?

Mr. McLure. Well, what I can do is describe to you exactly how we got that information. We met with FAA managers here at headquarters and described to them what information we wanted.

Basically, FAA notified the field facilities, in the cities and towers that we were going to be contacting, ahead of time, to tell them what information we were going to be asking for.

And then we telephoned a few days later, after those notifications had gone out, and asked the manager of each facility that we contacted what the answers to those questions we were going to ask were.

We then checked them as best we could against centrally collected information. But information on how much time, for example, a supervisor spends actually controlling traffic was not available centrally. So, the only way we could get an answer to that question was to ask the facility manager. That is exactly what we did. Now, if those numbers that they gave us are incorrect, we will be happy to go out and ask again.

Senator LAUTENBERG. I would ask you to do that. I assume that the FAA used very much the same source.

Admiral ENGEN. As I said, Mr. Chairman, we want to work with the GAO of course, and we will do so. And we can resolve this.

Senator LAUTENBERG. OK, thanks very much, Mr. McLure.

As I know you would readily admit, Admiral, that whether it is 40 percent or 20 percent of the supervisor's time, it still represents a relatively large amount of the supervisors who spend that amount of their time watching the screen. Is that typical of the supervisor's job? Or are they primarily training and managing people?

Admiral ENGEN. Primarily they are monitoring what is going on. Of course, as a supervisor, there is a modicum of training function and standardization.

But primarily, they are to watch the operation that is going on, and to ensure that there is a safe flow of air traffic.

NAS INDIVIDUAL EQUIPMENT COMPONENT

Senator LAUTENBERG. Admiral, we were talking earlier, and I am sure you heard the GAO comments about NAS and where they are concerned. They reported that there was equipment being delivered and that installations were taking place; 75 percent of all major NAS plan projects are under contract, and there are 4,400 individual equipment components. I assume that when we talk about a component we are talking about a whole component. I mean, we are not talking about a disc drive or something like that.

How would you describe an individual equipment component? Mr. Pozesky, are you the one to respond?

Admiral ENGEN. I will have Mr. Pozesky respond. But it could be a radar. It could be a piece of equipment.

Before I pass this to Mr. Pozesky, Mr. Chairman, I would like to make one more point if I could, please.

Senator LAUTENBERG. Sure.

Admiral ENGEN. You said that the administration had not asked for enough money. The record shows, sir, that over the last 5 years that we have requested funds for F&E, and those have not been appropriated to the amount of about $1.6 billion over the past 5 years.

So there is a different perspective.

Senator LAUTENBERG. That Republican Senate just did not want to produce, I guess. [Laughter.]

Mr. POZESKY. Mr. Lautenberg, the definition of a component, as used in that number, is a complete system, like a host computer, like a radar, like a flight service station. It can be very different in scope. It can be as small as a radio, or it can be as large as a host computer.

NAS PLAN PHASING

Senator LAUTENBERG. OK. How about, then, the GAO's concern about phasing and testing? I assume that you would support the program as phases I through X, whatever you want to make them. Phase I could include the detailed plan for the whole thing and so on. Finally, there would be something that would have full integration of all the components. After all, we are talking about a fully integrated system when we look at NAS, are we not?

Mr. HARRIS. Mr. Chairman, if I could respond to that, the concern expressed by GAO on the integration of all the pieces coming into the field is a very real one, and one that we are very conscious of, and we have taken a number of actions.

Earlier this year we added 200 temporary F&E positions to augment the F&E work force. In addition, we are distributing 100 additional SEI contractor positions to the field. The work is at interface point.

The TSSC contract that GAO mentioned is to further augment that and to cover the peak periods of installation.

As we get into production, we are looking at 80 to 100 pieces of equipment coming out, per month, that have to be installed in the field.

One thing I would like to correct about the TSSC contract. It is not an integration contract. It is an installation, wire pulling, rack mounting, and physical installing of the equipment-type contract.

We have about 800 F&E field positions. We peak in 1990 with a requirement for 1,600-plus positions. The TSSC contract gives us the capability to meet that demand.

INTEGRATED SYSTEMS RESPONSIBILITY

Senator LAUTENBERG. In terms of the integrated systems, Mr. Harris, are you the one responsible?

Mr. HARRIS. The SEI contractor, working with Mr. Pozesky as a deputy associate for NAS programs, serves the functions of integrating all the systems coming down the pike.

Senator LAUTENBERG. Now, are you concerned that we have gotten ahead of the design and testing programs as we order this equipment?

Admiral ENGEN. May I pick up and then pass it to Mr. Pozesky, please.

I have got to look you squarely in the eye and let you know that I acknowledge that the responsibility rests right here. And I charge these fine gentlemen to do it.

It is that responsibility that drove me after our hearings last year before this committee and the House to bring about the midcourse adjustment study.

We wanted to establish a greater autonomy for the NAS plan. We wanted to establish a discipline that I felt was missing there, and to redefine the responsibilities and the authorities.

When we set about to do this midcourse correction, it was with providing more responsibility and more authority, if you will, to Mr. Pozesky. And he does have direct access to me.

On a daily basis, we do meet, and we work with the systems engineering and integration contractor. I just wanted to be sure that I did not shirk my responsibility in this.

PHASING WITH CONCURRENT DEVELOPMENT

Mr. POZESKY. Senator Lautenberg, let me try to address that in the broad sense in which the question is intended.

Are we concerned about the problem of phasing and concurrent development? And the answer to that is clearly yes.

Are we doing anything about it? The answer to that is also clearly yes. Very recently we have made a number of midcourse adjustments.

One of them that deals specifically with this problem is to install a very formal process by which we review the readiness of any new system before we allow it to be fielded.

We call it a deployment readiness review. It is a new management discipline that we have just installed. It is a management discipline that the host computer, for example, went through before we implemented it.

We are of course concerned that we strike the balance that I think we are all concerned about; getting the equipment and getting some capability, but not prematurely implementing or prematurely authorizing production before the integrated system is ready.

I think we have had successes. I think the record would show that some of the equipment like the model 1 FSAS went out early, and then it had to wait.

We did not force operation with that equipment until the rest of the pieces were there. We have integrated it. We now have, I think, 30 or more model 1 flight service station systems.

The host computer implementation in Seattle was fairly carefully staged. We have challenges ahead of us in ASR–9 and MLS.

We are very concerned about system integration and we are trying to strike that balance. We are putting the management processes in place to keep our hands on the throttle.

CONTRACTOR RESPONSIBILITY

Senator LAUTENBERG. Of course, that is challenged, as you heard.

Your recent report to the committee on SEIC suggests that the SEI contractor should not be held responsible for slippages in NAS plan contracts, or projects that were underway before the contract was signed.

This includes several major systems you claim are critical to the NAS plan. These include the flight service automation system; the terminal radar system; the ATC host computer, AAS, as we heard talked about before; the MLS system; Mode S project; and the voice switching and control system.

Now, how can they have overall system integration responsibility and not be responsible for more than half of the planned system acquisition?

Mr. POZESKY. I think the context in which that particular phrase or construct was meant was simply the mechanical fact that many of those contracts for those programs were awarded before Martin Marietta was under contract to do the systems integration and the systems engineering.

So the question of whether the specification was right, whether it was planned properly, I think the reality is that if you look at the timing, many of those contracts were awarded before Martin Marietta was under contract to the FAA.

And that is the context in which that phrase is meant.

Senator LAUTENBERG. They are now the prime systems integrator.

Mr. POZESKY. Yes, Senator Lautenberg. But let me say one other thing if I might. There is, as I know your business background makes a very clear, important distinction here.

They are not the prime contractor for the national airspace system. We have no single prime contractor. The contractors all work with the FAA.

Martin Marietta works with us in integration. Again, from your business background, that is an extremely important distinction——

Senator LAUTENBERG. Why not make them the prime contractor? Who is responsible?

Admiral ENGEN. The FAA is responsible.

Senator LAUTENBERG. But we hear challenges. You support private sector initiatives. We hear criticism of the program as it is. I believe that we are not getting a fully integrated plan; that we do not have one in front of us as we go ahead and put in the components.

And why is it not a good idea to put them some place where someone who has a stake in this thing in a different way is responsible?

Admiral ENGEN. Let me respond to that, Mr. Chairman. First of all, the SEIC and we are full partners. I believe there has to be a clear authority for responsibility. And the FAA takes that on with the SEIC as a partner.

At that midcourse correction that I was talking about, part of what drove us——

MIDCOURSE CORRECTION/ADJUSTMENT

Senator LAUTENBERG. What is a midcourse correction? That is kind of nice terminology around here, Admiral. Does that mean we screwed up a few things in the past and want to change them?

What exactly does a midcourse correction mean?

Admiral ENGEN. It means, sir, that we got 5 years into the plan, and we found that times had changed. Some of the values that were set were differing. We needed to sit down and look at the program and put more discipline into it.

And in doing that this midcourse——

Senator LAUTENBERG. Can I draw from that very delicate terminology that things were not as they ought to be?

If you are out in the high seas, if you are in the Pacific and you are supposed to be in the Atlantic, that is quite a midcourse correction.

Admiral ENGEN. No; we saw that there was reason to change the emphasis we were putting on it. If you want to put it in terms that we were not doing business as well as we ought to, I would agree.

But that midcourse adjustment was to bring us into this timeframe halfway through the NAS plan. In doing that, sir, we looked at the SEIC, and we assessed his role.

Senator LAUTENBERG. What was the year that the midcourse took place?

Admiral ENGEN. June of last year, it was reported to me, sir. I started the look-see in April 1986; they reported to me in June.

Senator LAUTENBERG. The equipment that is being installed presently, was that ordered before June of last year?

Admiral ENGEN. Yes, sir. We are talking about management, sir.

Senator LAUTENBERG. But the midcourse correction may have rendered obsolete some of the decisions that were made before.

Is this a 90-degree midcourse correction? Is it 180 degrees?

Admiral ENGEN. Correction is the wrong terminology. Probably adjustment is better. It is a fine tuning. It is a vernier. It was not a major redo.

Let me emphasize that when we assessed the SEIC's role, and that is what we are talking about right now, we restated their role and their relationship to us.

We brought them on more as full partners with us. We gave them project responsibility, if you will, in five, and now going on six programs that we have.

We increased their technical direction. We asked for more project monitoring. We have integrated them into the FAA. As a result, I think the team is a stronger team today.

Senator LAUTENBERG. I hear what you are saying. I am not sure, Admiral, that we are focusing on the same thing. I am concerned about the integration of a system.

Now, you have seen it in some of the military systems, some of those on the ships where you really do need a systems coordinator; that almost becomes the most important assignment of all.

Equipment manufacture is, relatively speaking, rather simple. But the system coordinator, the one who is looking at this whole galaxy of things that have to be attended to, is the critical one.

And if we have shared responsibility or a partnership, and we bear this together kind of attitude, I think it is going to be very tough, looking back some years from now, to say retroactively, where, if anyplace, we did go wrong.

Should we not have made a salvage operation or a scuttle operation, and gotten ourselves back and said let us hold on to a few of these things as we build this system from the top down, instead of what I think is taking place?

THE HOST PROJECT

Mr. HARRIS. Mr. Chairman, one of the major things, I believe, that came out of that midcourse review, is a recognition that the funnel that we had been working with, which on the front end was in the research and development area, was beginning to switch around, and we were going to have significant numbers of equipments coming out of the pipeline.

We were moving from a development phase to an implementation phase. And it became very critical then to get the very thing you are talking about, a systems coordinator.

One of the most successful projects so far in the NAS plan, is the host computer. In the host project, SEI, using their A&E subcontractor, functioned in relationship to FAA headquarters and the field as the overall coordinator on the host implementation.

We had the facilities ready. We had the wires pulled. We had the air conditioning, the water, and everything else that was required.

Senator LAUTENBERG. When you talk about host, are you talking about the CPU that has everything? Or are you talking about a host based in some regional area that is dealing with the local problems?

Mr. HARRIS. It is a host computer that will be in each en route control center. For example, the host that was installed in Seattle has been installed in Houston, Denver, and other locations.

Senator LAUTENBERG. What does the host in Seattle do?

Mr. HARRIS. It replaces the 9020 computer, the old model 360's that you talked about.

Senator LAUTENBERG. Right.

Mr. HARRIS. It gives us the opportunity to operate and function until the advanced automation system comes into being.

It is one of the key elements in the overall NAS program to carry us through this period of time. In recognition of the host implementation and that the NAS plan was moving to an implementation phase, we saw the need for the TSSC contract and for moving additional SEI people out into the field to assist in this functional planning, coordination, and everything else required. This is the midcourse adjustment we were discussing.

Senator LAUTENBERG. Was that after the host installation in Seattle?

Mr. HARRIS. No; we had 100 people out there before that.We are putting another 100 out by the end of this calendar year.

MARTIN MARIETTA RESPONSIBILITY

Mr. POZESKY. Mr. Lautenberg, may I add one point?

On the notion of systems integration, I can say to you clearly that Martin Marietta has that responsibility.

Let me say what we have done. We have defined the engineering job to be done in the NAS plan to consist of four levels of engineering design: System level (broad things), second level (discrete, generic things like a radar), the third level is site specific (how you install that radar at a specific site), and the fourth level is the site adaption for that radar at a Teterboro, or at a La Guardia, a specific site.

That is an integrated, interlocking set of engineering designs. Martin Marietta has all four of those levels of responsibility.

We have struggled to maintain that engineering integrity centered in them. There were earlier proposals to take level four out. We have kept it in there. They are working with us at the levels one, two, three and four with that engineering responsibility.

At level four, they are working with our regions, because some of that is also done in our regions.

What we have tried to set up is a notion where the engineering integrity of this system, from top to bottom, in the integration function, is focused.

Senator LAUTENBERG. There are hosts and there are hosts. If we are talking about the total automated NAS plan, all of these regional hosts, if you will, have to be tied in.

Mr. POZESKY. Interconnected; yes, sir.

In the case of the Seattle installation, for example, the first thing that had to be done was to expand the center; a new building had to be built.

Martin Marietta worked on that design. That was done. The contract was let locally by the region for the construction; Martin Marietta was there, making sure that it came together.

That new building had to be outfitted, wired, et cetera. The host computer had to be installed. That is what we mean when we say the host kind of thing at Seattle.

Senator LAUTENBERG. That is in my view not a major electronic or automated system. But the physical facilities, they can be there. They could be adaptable to whatever the future systems are.

Again, I am concerned about how we merge in the whole process into a unified system throughout the country.

Mr. POZESKY. And again, I recognize that. And I say that we have struggled, and we have focused all four levels of systems and engineering integration responsibility with Martin.

Our regions play a role at the local level, but we share that concern.

CONTRACTOR PERFORMANCE AND FEES

Senator LAUTENBERG. The contractor's fee is based on, I quote here, internal management, technical performance, achievement of NAS plan objectives.

That is the definition about how the fee is awarded. The committee is informed to date the systems integration contractors received about 75 percent of the total award fee allowable under the contract.

Is that correct, Mr. Harris?

Mr. HARRIS. I believe so, yes, sir.

Senator LAUTENBERG. Given the schedule slippages and cost increases, how do you evaluate the contractors' performance in achieving the NAS plan's scheduled costs and benefit objectives?

Mr. HARRIS. That is a very formal process. There is a process by which each program engineer, project manager, assesses Martin Marietta's and their subcontractors' performance.

That goes all the way up through management, through all the levels of management, and ultimately, recommendations are made to an individual called an award fee official. The award fee official determines that fee based upon the recommendations of two levels of boards.

The overall NAS plan accomplishment plays a role in that. But also included in that are specific task assignments, and specific projects and programs that Martin has been asked to do by the organization.

Senator LAUTENBERG. Using the traditional scale that we see around these days, 1 to 10, how do you rate the contractor on internal management, technical performance, achievement of objectives?

Mr. POZESKY. We have been characterizing it probably as a B.

Senator LAUTENBERG. On a 1-to-10 scale, is D a flunk?

Mr. POZESKY. B as in baker.

Senator LAUTENBERG. No, I hear it. I just want to know what B means. If it is a scale, A to Z, that is very high. If it is a scale A through D or E, then it is OK.

Mr. POZESKY. Probably about 7 or 8, in that neighborhood, for the kinds of things they have been asked to do.

At the very beginning of the program, there was great expectations on the part of FAA that we could absorb 1,000 people from a cold start, and they would be very effective.

I think we have learned that they would have to learn. I think in retrospect they will admit they have had to learn the business of air traffic control.

Absorbing 1,000 people was not an easy process. I would say our estimates of their early performance were optimistic. They have gone through a learning cycle and a learning curve.

CONTRACTOR MANAGEMENT

Senator LAUTENBERG. You learn one thing in the software business, if you need 1,000 man-days to do a program, you cannot get 1,000 people to do it all in 1 day, can you?

How about their overall management? Is that where you are talking about the B-level performance?

Mr. POZESKY. Yes; their management has worked with us. We are focusing them more in certain direct management tasks.

There is about 1,000 ingredients that go into that award fee. Some of them have been low; some have been quite high. And the overall average I would characterize as about a B.

Admiral ENGEN. As the Administrator, sir, I do meet with the management of Martin, in concert with both Mr. Pozesky and Mr. Harris.

I would characterize the Martin-FAA relationship as a very positive one.

Senator LAUTENBERG. I would hope so. Admiral, we are spending a lot money there. If it is not positive, we are in deep trouble.

Admiral ENGEN. We are making money. We are indeed making money on it. They are responsive to our needs. We have a good relationship.

Just 6 weeks ago, we met with all the CEO's of all the major contractors of the NAS. That was at Martin's suggestion, and it was a very good suggestion. So it is a cooperative effort, sir.

AUTOMATED FLIGHT SERVICE STATIONS

Senator LAUTENBERG. In terms of the automated flight service station program, have there been some problems with this program?

Mr. POZESKY. Technically, there have been very significant software problems. They occurred a couple of years ago. They are now solved, in the sense that we have overcome them.

Senator LAUTENBERG. Is the hardware manufacturer responsible for the software as well?

Mr. POZESKY. The system contractor, E Systems in Dallas, is responsible for both hardware and software. The hardware piece is a Tandem computer. The software piece is being done by E Systems in Dallas.

They have the total system responsibility.

Mr. HARRIS. If I could, Mr. Chairman, there were some problems in the initial software operation.

Senator LAUTENBERG. Let me just be sure. The manufacturer is doing the operating software.

Mr. POZESKY. Yes, sir.

Senator LAUTENBERG. And the system software is being done by whom?

Mr. POZESKY. The system software is being done by E Systems, Garland Division, in Dallas, TX. The application software, if you will.

The operating system, as you well know, comes with the Tandem computers when you buy those computers.

Senator LAUTENBERG. And you say you have had considerable problems? You have acquired hardware and facilities before the software was up to the level it ought to be?

Mr. POZESKY. In that case, we had a contract with a single vendor who was responsible for building both hardware and software.

We had a fixed-price contract on the hardware, and we had a cost-plus contract with the software. Same program, same contract.

It turned out that they bought the hardware, because they got a good price, and they bought it in a large quantity. They had software problems—they could not make the software work; so the hardware was stored at Dallas until the software worked.

I do not want to leave the impression that we delivered to the FAA field facilities hardware before the software. The hardware was stored.

The contractor took delivery of the hardware, not the government.

Senator LAUTENBERG. Who paid for the hardware delivery? Did the government pay for it?

Mr. POZESKY. I think it is fair, in the context that you are asking, to say that we did not accept the system until both the hardware and the software were delivered.

Now, I can check that for the record. It may be that we provided payment on the hardware before the software was ready; I cannot be sure.

Senator LAUTENBERG. How long was it in storage?

Mr. POZESKY. The overall software delay in that program was probably 18 months to 2 years.

Senator LAUTENBERG. Is that putting the cart before the horse? Is it fair to suggest that maybe the cart was pulling the horse in this case?

Mr. POZESKY. In all honesty, sir, I would say it was not a cart-before-the-horse problem. We bought both the pieces together. The hardware was bought. The software subcontractor had to be terminated by the prime contractor for lack of performance.

The prime contractor pulled the software back in-house, did the software job, integrated the software with the hardware, and then delivered the combination to us.

I do not think at the time we could have anticipated that the software contract would have had to be terminated for default, for lack of performance.

Senator LAUTENBERG. I think you have a reasonable right to expect that that could happen. Anybody in this business knows very well that more often the fail dates are on the software side as opposed to the hardware side.

I would be very interested to see whether the FAA put any money into this program while the hardware was resting comfortably in storage. I hope that we did not have to pay the storage rental on that as well.

Is all of the equipment out of storage or are we still protecting it from the elements?

Mr. POZESKY. I want to be very precise. All of the 37 systems that we have bought of model 1 have now been delivered; but there is still some model 2 hardware in storage awaiting release.

The reason it is waiting is that we have changed our approach to the model 1 system. We are proposing to go with what we call a model 1 full capacity system, to get some earlier operational capability.

We believe that was the subject of the earlier GAO conversation. When that is approved, we will get it released.

Senator LAUTENBERG. Mr. Pozesky, if you had your druthers, would you have done your scheduling the way it worked out? Would you not have had a—now looking backward—a total systems planning development stage further along before that equipment was delivered?

Mr. POZESKY. An answer to that is very simple, Senator Lautenberg: Yes.

Senator LAUTENBERG. OK. It just took some time to get to that conclusion?

AUTOMATED FLIGHT SERVICE STATION MANPOWER

Admiral ENGEN. Mr. Chairman, could I add one more problem we have to that equation, It is a political problem, a local political problem in the sense that it is very difficult to close flight service stations.

There is a great deal of interest in the FAA, and I think properly so because we are part of the community. Some of our progress in consolidating into the automated flight service stations has become a cropper because we just literally cannot move people from small communities into the automated station.

Senator LAUTENBERG. Does that inhibit capability?

Admiral ENGEN. That has nothing to do with the capability, but it does have to do with the operational implementation of the automated flight service station.

Senator LAUTENBERG. But you were waiting for software. I mean, that had nothing to do with the staffing problem did it?

Admiral ENGEN. It has to do with the manning of the automated flight service station. Because the people that are going to man that automated flight service station are going to come from other flight service stations.

Senator LAUTENBERG. No; but then Mr. Pozesky is either in error or unintentionally misleading us.

He is saying that these systems are held up because there is not software. And you are saying that personnel are not available to you.

Do I understand what is going on?

Admiral ENGEN. Yes; I hope so.

Senator LAUTENBERG. I hope so too.

Admiral ENGEN. The technical side that Mr. Pozesky discussed is very valid. There is an additional side to this that I have just given you.

There is an additional side to it, which is the people.

FAA ACADEMY INTEGRITY

Senator LAUTENBERG. I understand that the inspector general is reviewing allegations of cheating at the FAA Academy. If these charges are confirmed, they have obvious implications in terms of the quality and the number of people that we can bring into the system for controlling air traffic.

Are you familiar at all with this?

Admiral ENGEN. Absolutely. Yes, sir.

Senator LAUTENBERG. What is the scoop?

Admiral ENGEN. Over the last year, I have received on the Administrator's hotline, one or two complaints about the existence of perhaps some cheating at the academy.

I have sent people there. I have personally gone out to the academy. I had these charges investigated.

I find that is not so. I welcome what is going on right now, and we will look again. Because I think it is very important that we continue to address this.

But let me assure you, sir, that people even advertise in the newspaper out there the sale of sample examinations. There seems to be a lot of people who would like to make money doing that.

Those are not the answers to the challenge, which is an academic course. Taking that exam, Mr. Chairman, is like taking a flight check in an airplane.

If I were to take you out and say, Chairman Lautenberg, I want you to go out and do stalls, spins, and "immelmanns," you would go out and you would demonstrate your capability.

The examination at the academy is a very dynamic examination. It is also just a step along the way. Those people do not leave the academy and go out and control traffic directly. They go out and they continue their training.

They are monitored in the workplace. And then they are qualified in the workplace.

So what might appear, if there were charges leveled that there was cheating at the academy and if that proved to be true, they are caught before they are qualified.

Senator LAUTENBERG. That is consoling. I think it is fair to say, is it not, that along the way we have made a fair investment in people who cannot do the job if that is the case.

If you do not get your high school diploma, there are not many colleges you can go to. And if what you are saying is that, well, even if they fake it through high school, we are willing to take them to the next level and invest our energy and money in training them, and we are going to catch them there.

Admiral ENGEN. But we will not countenance cheating at the academy.

Senator LAUTENBERG. OK. But so far, you have found nothing?

Admiral ENGEN. At this point, we have found nothing. We are going to look again. I welcome people to come look, because we want to be sure that is exactly what we say it is.

COMPUTER UPGRADE AT NEW YORK TRACON

Senator LAUTENBERG. I wanted to talk for a moment about the New York TRACON situation, which is one that GAO talked about.

You are requesting another $22 million for the computer upgrade there. The committee was told in fiscal year 1986 that this program would cost a total of $31.4 million, in round numbers, which we provided.

And last year we were told another $15 million would be necessary to complete the project, because of an extremely "critical and time-compressed scheduled," and "refined hardware/software requirements." Or maybe we just ought to say midcourse changes.

Now you are requesting another $22 million this year, using the exact same justification. Should we be surprised or concerned? Does the program have some problems? Or is everything OK?

Mr. HARRIS. No, sir; the program definitely has some problems. And I would be the first to admit it up front.

Mr. Pozesky and I have spent a lot of time the last month or so looking at this program. We have also asked that it be looked into from an audit standpoint to see just what went wrong with the program.

We have made some changes in the management side to have more effective control. The contractor has made some changes in the management side.

In terms of the specifics of our review, I would like to ask Mr. Pozesky to go into some details about what we are doing and how we intend to recover on the program.

Senator LAUTENBERG. If you would. I would be interested also to understand what went wrong; not just the prospective.

Mr. POZESKY. Let me again pick up where Mr. Harris left off.

The contract was awarded in a hurry. The successful contractor was, at that point in time, Sperry Corp. of Minneapolis. That contractor, because of the rush, was awarded startup fees before the contract was definitized.

The contractor went through some management changes. As you well know, Sperry Corp. is now part of Unisys. They ran into software problems.

They ran into optimistic schedules. We began to believe in June of last year the contract was running into problems. That fact was brought to management attention by Martin Marietta.

We called immediately for an independent audit. We put together a team of people internally to assess the program. They found a series of 22 problems ranging from lack of understanding of design requirements on the contractor's part to over optimistic schedules.

The next step we took was to bring Unisys' new top management into the problem. They were very responsive. They worked with us. They changed some of the management out at Minneapolis.

We also made some management adjustments internally. We put a very dedicated effort and high priority on this project. We even put a team on the site. We last week went through the critical design review, which was an important engineering phase in the program.

The critical design review was successful. The feedback that I have gotten is that the management improvements that have been made by Unisys have thus far been effective.

That is where we are in the program. I regret to say that the best thing you can do, when you make a mistake like that, is to admit it. That is what we are doing.

We are taking the necessary corrective action to get that program back on line jointly with the Unisys Corp.

Senator LAUTENBERG. Mr. Engen, do you have just a couple of minutes? I am told there is a vote that is critical. This is so interesting and kind of better than some of the other material we have been reviewing. Therefore, I would like to get back to it.

The committee stands in recess for about 5 minutes.

[A brief recess was taken.]

Senator LAUTENBERG. We are reconvened. We will be finished in just couple of minutes here.

Admiral ENGEN. Mr. Chairman, if I could address your interest at the end there.

Senator LAUTENBERG. Sure.

Admiral ENGEN. I want to assure you, I believe the GAO was correct in its views on the New York TRACON. It was and I am today——

Senator LAUTENBERG. That is one for their side.

Admiral ENGEN [continuing]. —very concerned. And as Mr. Pozesky said, I caused an audit to be done. That audit will be completed toward the end of June. And it is in process right now.

I am going to let that audit go wherever it will, and we will answer to whatever is found.

Senator LAUTENBERG. Again, Admiral, my interest is honestly not punitive. It is intended to compile a record that we learn from and enable us to go on from here.

I am on the same side as all of you are.

I wanted to just ask this question. For fiscal year 1986, we were advised about the roughly $31.5 figure. Is that correct?

Mr. POZESKY. That's correct.

Senator LAUTENBERG. Why was the miss so enormous? Is the $22 million that we are now looking for the end of it? Who paid for the mistakes? Did Sperry, was that a fixed-price contract, or was that time and materials?

Mr. POZESKY. No, sir, it wasn't. It was a cost-plus contract. And we, the government, will have to pay for the mistake.

Senator LAUTENBERG. Was that because we could not get the contractor to take a fixed-price contract in this case, or did we feel we would be better off? Again, this is not second guessing.

Mr. POZESKY. I understand. I am not capable of answering that, since I was not part of that negotiation or that decision on structuring that contract.

I suppose I can provide it for the record.

Admiral ENGEN. Mr. Goldman might be able to add something here, Mr. Chairman.

Mr. Goldman is the Associate Administrator for Administration.

Mr. GOLDMAN. It was a negotiated contract. One of the problems or reasons why we headed toward the negotiating approach as part of the price, is that there were some unknowns that still needed to be worked out.

Senator LAUTENBERG. So was that at the insistence of the contractor, Mr. Goldman, or was that the FAA's insistence? Knowing that we might run into a problem or two, I imagine that must have been the contractor's preference?

Mr. GOLDMAN. It was the contractor's preference.

Senator LAUTENBERG. And we had no choice but to go along?

Mr. GOLDMAN. The choice would have been not to have that contractor.

Senator LAUTENBERG. OK, do we know how much—I do not know who wants to answer—but are we assured that the $21 or $22 million additional is going to put us at that final stage?

Admiral ENGEN. Let me go back to my point, Mr. Chairman, the audit is in process right now. I am not assured that it is. And I want to run this audit, its full trail. We will provide you with a copy of that audit because of your interest, but at this point in time, I am not sure.

Mr. POZESKY. May I add one other point to that?

Senator LAUTENBERG. Please.

Mr. POZESKY. We stated in the House Appropriations Committee and would like to state here for the record, too, that we are anticipating another $13.9 million requirement next year to complete this program in 1989.

Senator LAUTENBERG. What does that do? Will we plan to be in business with the upgraded system in this fiscal year?

Mr. POZESKY. We were planning to be in business this summer, summer of 1987, however, let me just do this top down and give you the overall picture.

There is an additional fiscal year 1989 budget requirement to complete the program under our current estimates of $13.9, subject of course to the audit which Admiral Engen has talked about.

In terms of deliverables to the actual facility itself, we began the process of adding capacity to the New York TRACON well over 2 years ago when we reworked the software, which put some more efficiencies into the software, and brought us some additional capacity.

That is currently operating now. The next increment of capacity upgrade at New York TRACON is scheduled for February 1988. We are going to put some more gadgets in there, solid state memories and that kind of thing, and to buy us some more capacity.

The first delivery of new displays coming from the Unisys contract is targeted in the summer of 1988.

Senator LAUTENBERG. What does that do to the ability in 1987 to provide the capacity we need?

Admiral ENGEN. It means that right now, Mr. Chairman, we cannot add additional requirements to the computer at the New York TRACON, and that has an impact on Teterboro.

Because we are relying on an upgrade in computer capability to put that Brite at Teterboro.

Mr. POZESKY. In terms of airspace capacity, though, we have looked at the ability of New York TRACON to handle the projected loads in terms of airspace capacity, and believe there is adequate computer capacity to accomplish that.

Senator LAUTENBERG. The thing that I see here and what concerned me initially, is that obviously something went awry here. Something that may have been preventable.

You know the story about hindsight. The thing it does say to me is that we have a systems integration problem that is going to cost us an awful lot more money than we expected, than we presented to the American people.

And the delays are certainly going to impair the ability to accept additional traffic. The inability is there, and I am concerned about that. I don't know whether this confirms some of the fears that we had, as GAO outlined them. But certainly at least it raises my antenna on these things.

Admiral ENGEN. Certainly, I want to tell you, Mr. Chairman, that my antenna is out. I have taken summary action in this. I intend to pursue it.

I think it is more of a development problem than a system integration problem. But anyway, the facts will be made known, and we are going to take action.

I am just not going to have programs like that come in over cost and over time. We are going to manage that.

I would like to think that we profit by this mistake, and it is a mistake.

Senator LAUTENBERG. Again, it suggests something in the planning phase that was kind of missed here, as you obviously know.

MLS REPLACEMENT OF ILS

You are requesting $48.8 million for 38 MLS's. I understand your general plan is to replace the existing ILS systems with 1,250 MLS's over the next several years.

Your first contract in 1984 called for 178 of those, with the first installations to be January 1986. This schedule, however, slipped by a couple of years.

What is the problem here?

Mr. POZESKY. Very simply, Mr. Chairman, the contractor did not perform and meet their original requirements. It is a fixed price contract. They are now 28 months late.

Senator LAUTENBERG. Who is the contractor?

Mr. POZESKY. Hazeltine Corp. in Long Island.

Senator LAUTENBERG. Are they eating the mistake in this case?

Mr. POZESKY. Yes, sir.

Senator LAUTENBERG. I guess we should have done that with the TRACON system as well. OK.

Admiral ENGEN. That does bring up a point, sir, that you may want to address. Which is, in the interim, there is a need to continue to supply some ILS.

The GAO made a couple of statements about ILS that I would like for the record to address just briefly.

Senator LAUTENBERG. Please do.

Admiral ENGEN. The reason for the MLS, and that is an international standard agreed to by the ICAO nations, is that all the major aviation nations are agreeing that we will go to MLS. The reason for MLS is for a general upgrade in the navigational capability of the United States, and indeed, the world.

We are committed to eventually going with MLS. We cannot continue to use ILS in the sense that it is literally an outmoded technology, my words, in the sense that it subtends in space a fixed course, if you will, which must be intercepted and flown on only one angle.

And the MLS offers flexibility which can allow us to use the airspace to better capability.

Plus the fact that the MLS, once we begin to procure it in sufficient numbers, is going to be much more cost-effective to maintain and to install. We just recently spent upward of $2 million trying to trick an ILS system into thinking that there was ground out at Reno where there was a valley. It is a very expensive system to use.

And as we move to the MLS, we will have to be procuring some more ILS's on a very selective basis, based on need and capacity.

But we are going to move toward MLS.

Senator LAUTENBERG. What is the expected installation date now for the MLS system?

Mr. POZESKY. We are projecting March 1988, for first delivery from Hazeltine. Hazeltine has informed us that they are trying to meet January 1988.

Senator LAUTENBERG. When would the whole 178 be delivered?

Mr. POZESKY. Over about a 2-year period.

DUAL MLS/ILS SYSTEMS

Senator LAUTENBERG. I just want to close out with this. DOD is planning to provide dual MLS/ILS capabilities in military aircraft landing systems.

The Air Force is developing a dual MLS/ILS receiver, in fact. In the meantime, commercial aviation and general users are continuing to order aircraft equipped with ILS systems.

Should we not recognize that we are going to have that mix for the foreseeable future, and encourage or require the aviation community to follow DOD's approach?

Admiral ENGEN. Mr. Chairman, any change in any system is a very difficult thing to bring about. To require that they be dual, I think, would be unduly expensive to the general aviation users.

I have a commitment from the major airlines that they will install, retrofit, MLS transceivers, if you will, to use the MLS that we install. We have just completed a major look at the 178 MLS's that we are going to install, to ensure that we are putting them in places that they can be used, that is, not one in San Diego and one in Bangor, ME.

We want to put them along routes which will enable them to be used. We want to make the transition as easy as possible for the users.

It will be a long time, it will be into the 1995 timeframe, 1998 timeframe, before MLS will be required.

Senator LAUTENBERG. Admiral, you have a letter that you wanted to be included in the record regarding the budget resolution. We will do that.

[The letter follows:]

LETTER FROM DONALD D. ENGEN

MAY 8 1987

The Honorable Frank Lautenberg
Chairman, Subcommittee on Transportation
Committee on Appropriations
Washington, DC 20510

Dear Mr. Chairman:

At yesterday's hearing we discussed briefly the impact of the Senate Budget Resolution (SBR) on the Federal Aviation Administration's (FAA) program for FY 1988. I feel compelled to send this letter to you to elaborate on the damage the SBR allowances could cause. The levels, as best as we can determine them, are diametrically opposed to the need discussed in yesterday's hearing to continue to build up the controller work force and to expand the number of full performance level controllers. Further, as we will discuss at today's hearing, the damage and disruption the SBR levels could cause for the National Airspace System (NAS) Plan are equally harsh.

In a word, the FY 1988 SBR would be devastating for the FAA. I can see it causing air traffic delays in 1988 and 1989. Overall, it would cut about $800 million from our FY 1988 request. If applied rigidly to each appropriation--which would not be our preference--it would cut $250 million to $300 million from our request for Operations and $540 million from our request for Facilities and Equipment. If implemented, I would like the opportunity to discuss the distribution of reductions with you prior to your mark-up.

In our Operations appropriation, we have almost $300 million of new mandatory costs to cover next year--the new retirement system, the cost of the January 1987 pay raise, inflation, and communications cost increases. Over three quarters of the appropriation is for payroll costs. Our employees would take the brunt of the cutback and, in turn, so would the essential safety services they provide to the public. Terrible employee morale and a build-up of long-term staffing and operational problems would be automatic results of major budget cuts.

In terms of specific actions, all new initiatives in the budget would have to be deferred--no increase in controllers in the face of 6 percent traffic growth; no increase in safety inspectors and security staff in the face of known workload; no pilot test of contract maintenance; and similar retrenchment. An agencywide hiring freeze would have to be instituted perhaps as early as July 1 of this year--only enough people would be hired to replace attrition in the controller, inspector, and maintenance work forces. In several areas, including the maintenance work force, we still have not recovered from the six-month long hiring freeze in FY 1986 as a result of the Gramm-Rudman-Hollings cutbacks a year ago. Furloughs of 9 to 16 days for each FAA employee would be scheduled starting as early as this October. Within grade and merit promotions would be stretched out or suspended.

Non-payroll actions would also be taken. Travel restrictions would be imposed associated with training, management, inspections, and maintenance. Permanent change-of-station (PCS) relocations would be reduced sharply--this would lead quickly to a poor distribution of critical technical skills (controllers, inspectors, and technicians) needed to replace retirements and promotions. Overtime would be curtailed despite the fact that it is essential to accommodate training and peak workload period requirements. Our ability to maintain an even flow of spare parts and replacement equipment would also be impaired.

Facilities and Equipment

For the Facilities and Equipment appropriation, a cut of about $540 million would cause us to cut back, stretch out, or delay for a year or more any new initiatives. Projects we would have to consider included the long-range radar replacement program that has been in the joint planning stages with the Air Force for several years; the terminal doppler weather radar program design to detect wind shear conditions near airports; and replacement of several obsolete control towers. Other major NAS Plan projects now underway would require us to defer or maybe even forego award of options on existing contracts for essential equipment. The Advanced Automation System schedule would have to be rethought.

Essentially, the NAS Plan and its program schedules, as we know them today, would have to be recast completely. The NAS Plan is the largest non-defense Government technology program since the Space Shuttle. It has very intricate schedule requirements, and the equipment and facilities that it provides must be phased into operation in real time--we cannot shut down the air traffic control system for days or weeks simply to introduce new equipment using advanced technology. The SBR cuts could not have come at a worse time. I can foresee major difficulties if the NAS Plan schedules are disrupted. We have multi-year authorizations to avoid precisely the kind of stop and start actions that the SBR levels imply. The SBR would totally negate a critical scheduling process.

Other Appropriations

The Airport Improvement Program (AIP) represents the only other FAA source of funds that the Committee could consider reducing in order to avoid the operational or NAS Plan impacts that I have described above. The AIP funds are apparently unscathed in the SBR. We support this and do not propose a trade-off of AIP dollars to restore the Operations or F&E reductions. There is an important need to continue to provide assistance to the Nation's airports. Many passenger delays are due to inadequate airport capacity. Further, those who pay the taxes that finance these programs would feel that Congress is breaking faith by not spending the aviation taxes for their intended purposes.

Conclusion

At Secretary's Dole's overview hearing, this Committee inquired about why some controllers might want to form a union. This Budget Resolution discussion is a prime example. Our employee attitude surveys show the very highest level of dissatisfaction with Governmentwide issues such as action on pay raises (none in 1986, only 3 percent this year), major changes to retirement plans, and appropriation-induced hiring freezes and furlough threats. The annual ritual of publically describing budget threats does not sit well with personnel in operational FAA facilities.

With respect to the Trust Fund, a cutback in FAA spending in the first year of reauthorizing legislation would quite likely be the straw that breaks the camel's back. It plays directly into the hands of those who would take the Trust Fund off-budget.

We need your help to seek appropriate amendments to the Budget Resolution or, at least, reallocation of spending within the Transportation function to avoid disrupting air commerce next year. Approval of the President's Budget for the FAA would protect air safety and air commerce.

Sincerely,

Don Engen

Donald D. Engen
Administrator

SUBMITTED QUESTIONS

Senator LAUTENBERG. We are going to conclude. We will have some additional questions that we are going to be submitting.

[The following questions were not asked at the hearing but were submitted for response for the record:]

QUESTIONS SUBMITTED BY SENATOR LAUTENBERG

NAS PLAN DELAYS

PREFACE

Admiral, your statement suggests that NAS Plan is, despite some minor delays, basically on track. You say the "Fiscal year 1988 begins the second half of the planned 10-year program..." and you cite various contract awards and the obligation of previous appropriations as evidence of continuing progress on NAS Plan projects.

GAO, as we have just heard, paints a considerably different picture. Delays in the scheduled deployment of the 11 major NAS Plan projects range from 1 to 8 years at this point. What is more, the Advanced Automation System which is the keystone of the NAS Plan, according to GAO, now at least 8 years behind schedule.

Let me say that, as one who has some background in the computer services industry, I believe the real test of progress on major system deployments is not how many projects you have under contract or how much money you are going to commit to this component in the next year. The real test is whether and when you will have the whole system up and running and producing the benefits it is supposed to produce. Measured against this standard, FAA's performance leaves more than a little to be desired.

QUESTION. The original completion date for the whole NAS Plan System was 1992. What is the current estimated completion date for NAS Plan, including all the projects incorporated in the original plan? What is your estimate of the total cost of this slippage both in terms of project cost overruns and deferred savings and productivity gains?

ANSWER. The original completion date for funding of the NAS Plan modernization program was fiscal year 1992. The time period represented a planned 10-year program of funding required to procure the NAS Plan equipments. However, the original NAS Plan implementation period extended well beyond the year 1992. Fifteen of the projects in the original 1981 NAS Plan had final implementation (i.e., operational readiness) dates well beyond 1992, with the last project implementation projected for the year 2000. The current 1987 NAS Plan now carries a final implementation date of 2001, 1 year later than in the original 1981 NAS Plan.

Since the 1983 NAS Plan baseline cost estimate was prepared, there has been an overall increase of some $2.1 billion. This $2.1 billion increase breaks down into an Advanced Automation System cost increase of $2.5 billion, other increases not offset by decreases of $ .4 billion and a Microwave Landing System decrease of $ .8 billion. Attributing which part of the overall increase that is associated solely with program slippage is not feasible. Any analysis is complicated by other factors besides schedule considerations that have contributed to cost growth including increased scope involving additional functions, expanded testing, increased operating positions, redundancy, system quantity increases and increased complexity.

NAS Plan schedule slippages have impacted the accumulation of NAS Plan benefits. Benefits start accumulating upon final implementation (operational readiness) at each project site and are accumulated over the full life cycle of the equipment. Delays in final implementation of projects do not reduce overall life cycle benefits, but instead defer the accumulation of those benefits to a later time period. Using the year 2000 as a benchmark for accumulated benefits, of the $15.0 billion (constant 1981 dollars) estimated to accrue to the FAA operations, $1.0 billion ($320 million 1981 present value) has been deferred to post 2000 as a result of schedule slippage.

SUPPORTING DOCUMENTATION

1987 Plan Projects Beyond 1992

	Implementation Date
Traffic Mgmt System (TMS)	95
Voice Switching & Control System (VSCS)	93
Advanced Auto System (AAS)	98
Auto En Route Air Traffic Control (AERA)	01
Area Cont. Facilities (ACF)	99
Tower Comm Sys	97
Flt Serv Auto Sys (FSAS)	94
Central Weather Processor (CWP)	95
Auto Weather Obs Sys (AWOS)	94
Microwave Landing System (MLS)	01
Runway Visual Range (RVR)	94
Mode-S	95
Long Range Radar Program	96
Weather Radar Program	95
Term Doppler Weather Radar	96
Data Multiplexing	95
NADIN	95
Radio Cont. Eq. (RCE_	99
Maint. Cont. Ctr	95
Large Cable Loop System	96
ARTCC Plant Mod	93
NARACS	
SEI	94
System Support Lab	93

1981 NAS Plan Projects Beyond Year 1992

	Implementation Date
9020 Replacement System Design	93
Automated En Route Air Traffic Control (AERA)	95
Integrated Flow Mgmt	96
Tower Comm Sys	93
ATCT/TRACON Relocate, Mod & Takeover	99
Automated Weather Observing Sys (AWOS)	93
VORTAC	00
Non-Directional Beacon (NDB)	00

Microwave System (MLS)	99
Direction Find (DF) Modem	00
Mode-S/Data Link	00
Satellite Trunking (Integrated Voice/Data)	93
Aircraft Fleet Conversion	00
Modernize & Improve Unmanned Facil. Bldg & Eq.	00
Modernize Airport Cable Loop System	95

NAS PLAN/DELAYS/SYSTEM INTEGRATION

QUESTION. There is obviously considerable variation in the progress and status of NAS Plan projects. Last year, you told the committee that about 50% of the "90 NAS Plan projects are on/or ahead of schedule". Presumably this means that 50% were behind schedule at that time. You also said that you expected 2 of the 11 major system acquisitions "to be completed in accordance with the original schedule". Now GAO in a report issued just last month says that none of your Major Systems Acquisitions is on the original schedule.

o What is your explanation for this continuing pattern of slippage after slippage in NAS Plan projects?

o What impact will these huge schedule differences among the projects have on overall system deployment and implementation plans?

o If some projects are ahead of schedule while others fall behind to varying degrees, aren't we likely to some very expensive equipment setting around unused or underused because the other components of the system are not available?

ANSWER. While it is true that NAS Plan projects have experienced slippages, it is misleading to imply that none of the Major System Acquisitions (MSA) is on the original schedule. Three MSA projects are now actually scheduled for completion earlier that shown in the 1981 NAS Plan. They are:

Project	Last Implementation Date 1981 NAS Plan	 1987 NAS Plan
Aircraft Fleet Conversion/Flight Inspection Modernization	2000	1988
Mode-S	2000	1995
ASR-9	1992	1991

NAS Plan slippages can be attributed to a variety of factors such as overly optimistic planning, software development problems, contractor difficulties in development and testing, budget deferrals, inter-agency coordination problems, changes in procurement strategy and, in some cases, to minor changes in project scope (requirements). The FAA is fully committed to resolve these difficulties if and when they arise.

The functional interdependencies between projects have been defined and are continually being analyzed to assure that projects are deployed in the most orderly manner, and that the total impact of slippages to the overall system implementation is minimized.

Interdependencies between projects are one of the major complexities of the NAS Plan. The FAA has experienced problems with equipment delivery schedules getting out of optimum sequence. These problems are analyzed continuously to maximize delivery, installation, test, and implementation efficiency. Emphasis has been placed on identifying interdependencies, analyzing schedules, planning transition and implementation in order to prevent equipment sequencing problems; however, in spite of all these efforts storage of some systems may be unavoidable.

SYSTEMS INTEGRATION/AFSS

Question. In fact, you've already experienced this problem with respect to your Automated Flight Service Station program, haven't you? My understanding is that you have acquired both hardware and buildings for AFSS's well before the software for Automating Flight Service information was available.

How much did it cost?
When do you plan to install it?

Answer. The initial contract with E-Systems called for a Model 1 and Model 2 Flight Service Automation Systems, with all equipment bought up front--this was to realize cost savings and to assure commonality of equipment. This equipment will be utilized for Model 1 Full Capacity.

1. 17 Million of the original hardware cost was for Model 2 (now Model 1 full capacity) equipment.
2. Total Building cost to date is $52M.
3. Installations of Model 1 full capacity equipment should begin approximately September 1989.

NEW YORK TRACON

Question. You are requesting another $22 million for the New York TRACON computer upgrade. The Committee was told in FY-86 that this program would cost a total of $31.44 million which we provided. Then last year, we were told that another $15 million would be necessary to complete the project because of an "extremely critical and time-compressed schedule" and "refined hardware/software requirements". Now you are requesting another $22 million this year using the exact same justification.

If computer capacity problems do occur, what actions will you take to maintain safety?

Answer. Initial actions would include:

- Reducing time frames for receiving flight plan information from New York Center.
- Initiating range/azimuth gating (modifying tracking limits of radar).
- Eliminating "old" flight plan information from the system's data base.

Additional actions possible to reduce processor utilization include:

- reducing eligible data or terminating Continuous Data Recording function.

- inhibiting the execution of intersensor conflict alert processing (targets associated with different sensors).

If required, operational modifications available to the facility include:

- Limiting traffic flow into and out of the TRACON's airspace. Done through coordination with Central Flow Control and surrounding facilities.

- Avoiding track initiation of non-transponder equipped aircraft. (Targets would continue to be displayed).

Ongoing system optimization efforts indicate some processor utilization gains may be realized through recently developed software modifications.

ADVANCED AUTOMATION SYSTEM (AAS)

Question. The Committee, as you know, has been very concerned about the risks inherent in your plans for concurrent development and production in the procurement of the Advanced Automation System (AAS). On March 16, 1987, we wrote you to approve the release of the funds provided for AAS this fiscal year, subject to your taking further action to reduce these risks. Specifically, we asked that you develop and submit to the Committee a plan for mitigating the technical and operational risks that remain in your revised acquisition strategy. I understand the full report will be available later this month. I have several questions.

- o What additional tests and evaluations do you intend to perform with respect to the Local Communications Network (LCN) and AAS software for basic air traffic control (ATC) functions during the design phase?

- o Specifically what ATC function or functions do you plan to perform in Ada and demonstrate during the design phase?

- o When do you expect to complete the required operational tests and evaluation of the Initial Sector Suite System (ISSS) with advanced control computer complex hardware and software?

Answer. With respect to tests and evaluations the FAA intends to perform on LCN and AAS software in the design phase, the contractors are required to demonstrate a fully functional LCN with simulated common console inputs and outputs, showing their LCN design's capability to satisfy system level specifications (SLS) functional, performance, reliability/maintainability/availability (RMA), extensibility and growth requirements. The contractors are also required to replace console simulation with the prototype common consoles executing the station management software, and demonstrate the system with more extensive RMA scenarios.

To demonstrate the effectiveness of their documented software development procedures, the contractors are required to code and demonstrate two functions in Ada: the "Target and Track Data and Symbology" and "Track Vector" requirements of the SLS.

The ISSS will undergo the following test and evaluations as the AAS evolves into its final hardware and software configuration: (1) Operational, test and evaluation (O,T&E) of the ISSS with the Host computer system is scheduled to be completed by March 1992, (2) Technical interoperability tests of controller workstations with Area Control Computer Complex (ACCC) hardware and software is scheduled for completion by March 1992, and (3) Full O,T&E of controller workstations with the terminal ATC functions of ACCC hardware is scheduled for completion by September 1993.

MICROWAVE LANDING SYSTEM MLS/ILS (INSTRUMENT LANDING SYSTEMS)

QUESTION: You are requesting $48.8 million for 38 additional microwave landing systems. I understand that your general plan is to replace the existing instrument landing systems with 1,250 MLS systems over the next several years. Your first contract in 1984 called for 178 MLS's with the first installation in January 1986. This schedule, however, has slipped by over 2 years. Will any of these systems be installed at the 22 pacing airports? If not, why not since the justification for MLS is that it enhances airport capacity?

ANSWER: Of the 22 pacing airports, 20 locations will be satisfied within the first MLS buy.

SATELLITE TECHNOLOGY/NAS PlAN

Question. Satellite based technology has undergone very rapid development over the last several years with applications in a wide variety of areas including -- weather, oceans research, petroleum exploration, telecommunications and navigation. There appears to be considerable potential for adapting these satellite technologies for communication, navigation, and surveillance functions (CNS) in aviation. In fact, I understand that the Radio Technical Commission for Aeronautics and an international committee are evaluating the potential use of spaced based technology for global air traffic control.

- Do you plan to modify the major NAS Plan air traffic control systems such as AAS to make them compatible with satellite based technologies?
- If not, why not?
- Given the likelihood that satellite capability will be available, shouldn't NAS Plan systems be designed to incorporate - or at least be compatible with - this new technology?

Answer. The FAA is actively developing applications of satellite technology for communication, navigation and surveillance in support of civil aviation.

A principal initial application of satellite technology is the utilization of the military Global Positioning System to provide navigation services for civil aviation. The NAS Plan includes a project to provide the ground facilities that are required to support this application.

The FAA systems engineering process assures that plans for facilities and equipment will evolve to incorporated future applications of satellite technology as these applications are developed.

INACCURATE STAFFING REPORTS

Question. On February 19, I wrote you about my concerns with your implementation of the so called "Expanded East Coast Plan", I was specifically concerned about the adequacy of controller staffing and training. Two months later on April 20, you responded. And in your letter you referred to your "facility staffing levels on board (underlining added) on February 28, 1987".

I take it that when you report to the Committee the number of FPL controllers "on board" you mean what you say. However, the GAO found that your so called "on board" numbers overstated the number of actual FPL's at five of the facilities affected by the plan: The Washington En route Center; N.Y. TRACON, BWI Airport, National Airport, and Newark Airport.

Why wasn't this Committee given accurate information?

Answer. The information provided to your Committee was accurate. Our staffing information is kept in the Personnel Management Information System (PMIS) which tracks controllers by their grade level. The information we disseminate on controller staffing is the official set of numbers that are generated by the PMIS. Because of the way your Committee's question was asked, we provided the official PMIS staffing numbers.

When GAO performed their staffing survey, they went to the facilities and asked what the staffing levels were. The attached document is provided for the record and will show the major discrepancies in methodology utilized and in the data that appeared in the GAO report as well as the corrected data that we have provided. While we agree that there is a basic difference in the way controllers can be counted, we feel that the PMIS provides consistent and verifiable output and should be used when feasible. Although, in some instances we do use an actual count of controllers taken by the facility, in the interest of constancy we try to use the PMIS for our staffing information as much as possible.

[CLERK'S NOTE: Only Exhibit "C" of the attachment referred to by FAA is relevant to this question and is included in the record. Exhibit "C" shows that for each of the five air traffic control facilities referred to in the question, the staffing data on full performance level (FPL) controllers derived from the Personnel Management Information System (PMIS) differs from the "on board" data provided by both GOA and FAA. Moreover, the FAA "on board" numbers were not verified.

FAA's response also alludes to inadequacies in GAO's methodology for obtaining the staffing data it reported to the Committee. In that regard, the Committee believes it is appropriate to include in the record at this point the formal GAO response to an FAA letter concerning alleged inadequacies in the way GAO conducted its study.]

TABLE 3.2: 1987 FPL CONTROLLER STAFFING

GAO has begun this table with a listing of the 1987 authorization for controllers with the implication that the number is the number of FPL's we should have on board. The authorization is, in reality, a number of GS-11 and above controllers that should be in the facility by the end of the fiscal year (September 30, 1987). It has no relationship to the number of FPL's either planned or required.

While the GAO and the FAA agree for the most part on the PMIS staffing numbers for the end of February, the "on board" numbers do not agree. The GAO purportedly used information supplied by the facilities, but the FAA numbers were telephoned by the facilities and show actual FPL qualified and certified controllers on February 28.

	GAO REPORT			FAA STAFFING b		ON BOARD STAFFING COMPARISON	
CENTERS	FY 1967 CONTROLLERS AUTHORIZED*	2/28/87 PMIS FPL'S	2/28/87 ON BOARD FPL'S	2/28/87 PMIS FPL'S	2/28/87 ON BOARD FPL'S	DISCREPANCY	MAGNITUDE OF DISCREPANCY
ALBUQUERQUE	266	183	178	183	189		
ATLANTA	410	298	273	298	290		
BOSTON	307	165	134	165	155	YES	21
CHICAGO	394	185 a	118 a	188	123 **		
CLEVELAND	395	221	212	221	221	YES	9
FORT WORTH	320	228	220	228	225	YES	5
HOUSTON	289	202	196	202	213	YES	17
INDIANAPOLIS	283	139	123	139	131	YES	8
JACKSONVILLE	285	195	201	195	218 ***		
KANSAS CITY	300	210	199	210	202	YES	3
LOS ANGELES	287	175	167	175	168	YES	1
MIAMI	237	140	131	140	129	YES	-2
MINNEAPOLIS	235	142	138	142	137	YES	-1
NEW YORK	288	169	174	169	165	YES	-9
OAKLAND	264	137	138	139	151	YES	13
WASHINGTON	409	235	232	235	232		
TERMINALS							
ATLANTA	85	77	66	76	64	YES	-2
BALTIMORE-WASHINGTON	55	35	29	35	33	YES	4
BOSTON	52	33	35	33	31	YES	-4
BURBANK	39	23	18	23	18		
CHARLOTTE	55	43	33	43	33		
CHICAGO	102	81 a	61 a	87	61		
CLEVELAND	38	23	24	23	26 ***		
DALLAS-FORT WORTH	94	83	78	83	77	YES	-1
DETROIT	66	50	48	50	39	YES	-9
EDWARDS AFB	28	20	17	20	17		
HOUSTON	59	53	49	53	49		
INDIANAPOLIS	36	35	26	35	27	YES	1
JACKSONVILLE	44	30	24	30	23	YES	-1
KANSAS CITY	34	30	24	30	27	YES	3
KENNEDY	15	15	15	15	15		
LA GUARDIA	15	15	15	15	15		
LOS ANGELES TOWER	27	18	14	18	16	YES	2
LOS ANGELES TRACON	45	33	29	33	30		
MIAMI	75	62	45	62	46		
MINNEAPOLIS	52	40	37	40	39	YES	2
NEWARK	26	23	19	23	21		
NEW YORK TRACON	143	99	91	99	104	YES	13
OAKLAND TRACON	64	49	44	49	44		
PHILADELPHIA	56	41	34	41	34		
SAN FRANCISCO	26	24	20	24	19	YES	-1
ST. LOUIS	56	29	27	30	27		
WASHINGTON NATIONAL	55	39	36	39	36		

23

* Controller authorization is for all controllers GS-11 and above. There is no specific authorization for FPL controllers so this comparison is meaningless.
** Chicago is in the process of changing to a high-low configuration.
*** Backlog of paperwork in personnel offices may cause a delay in PMIS updates.

a As of January 31, 1987
b On board staffing was reported by the facility manager.

LETTER FROM J. DEXTER PEACH, ASSISTANT COMPTROLLER GENERAL, GENERAL ACCOUNTING OFFICE

July 20, 1987

The Honorable T. Allan McArtor
Administrator
Federal Aviation Administration
U.S. Department of Transportation

Dear Mr. McArtor:

In a May 28 letter, the former Administrator expressed concern about our May 6, 1987 report to the Chairman, Subcommittee on Transportation and Related Agencies, Senate Committee on Appropriations (GAO/RCED-87-138FS). Specifically, FAA's letter said there were a significant number of differences between GAO and FAA's "comparably derived" data and that GAO's methodology did not always appear appropriate. The letter also expressed concern that while the report contains no conclusions or recommendations, the data in the report could lead readers to reach conclusions that might be misleading.

As arranged with FAA officials, we gathered much of the information by telephoning FAA's field facilities. Using unverified, testimonial information is not GAO's preferred audit approach. However, its use was necessary in this case because 1) current and complete FAA information was not otherwise available, and 2) there was limited time available to meet the Chairman's needs. We have since been able to visit six of the facilities discussed in the fact sheet-- Chicago Center, Chicago O'Hare, New York Center, New York Tracon, Philadelphia Terminal, and Washington Center. By reviewing staffing reports and other personnel data, we have verified the accuracy of numbers we presented in our fact sheet for these six locations.

As part of that verification we also sought to determine why differences would exist between the data we reported and the data in FAA's May 28 letter. In many instances the two sets of data were not in fact "comparably derived." Some examples of what we learned follow.

-- FAA criticized GAO's methodology for reporting on-board staffing. According to FAA, we excluded certain full performance level (FPL) controllers on temporary promotion to first line supervisors. This is not accurate. The FPL controllers we reported include all FPLs charged to the facility, as of February 28, 1987, including those on details such as temporary promotions. To preclude double counting FPLs, we excluded from our count of first line supervisors those FPLs who were serving in those positions temporarily as we had already counted them as FPLs.

-- Time spent controlling traffic for both traffic management unit staff and first line supervisors is correctly represented in our report as the experience during the February-March timeframe. Our verification showed that the difference between the numbers FAA gathered in May 1987 and those we received in March reflected the differences in the managers' assessments of conditions for two different points in time. For example, the reason the New York Center told us that supervisors worked traffic 40 percent of their time in March and told your staff 25 percent in May is that in March the Center was in the midst of implementing Phase I of the Expanded East Coast Plan. At that time, supervisors were regularly scheduled to work traffic in addition to time spent during the work day relieving controllers for breaks. This situation had changed by May.

-- The training attrition data we reported accurately reflects names and records provided to us by the field facilities. Your staff used a different source--the FAA Academy--to derive its data. We do not know, at this time, why differences exist between the Academy's data and the field facility data.

-- The traffic management unit staffing standard figures and the operational error data which FAA's letter critiques were provided to us by your headquarters staff in the Office of Air Traffic Evaluations and Analysis. This office provided us with: (1) a printout entitled "FY 1987 Center Staffing Standard for Overhead and Supervisory Positions" which was our source for the traffic management unit staffing standard, and (2) tables showing all operational error data for our sample facilities. We transferred these numbers directly into our report.

As the above examples show, there has been substantial confusion over controller and related staffing figures. It was not within the scope of our work for the Chairman to examine the adequacy of FAA's management information system. However, questions continue to exist concerning staffing data. As recently as June 15, Deputy Secretary Burnley testified to this confusion. Part of the problem is the fact that the Department's Personnel Management Information System (PMIS) tends to overstate facility staffing levels. In this regard, we understand that FAA plans to refine its PMIS so that there will be a data base that can be looked to for reasonably current and complete data on controller staffing levels.

We are supportive of FAA's efforts to more accurately reflect controller staffing levels and to improve PMIS. I believe that we have a mutual interest in ensuring that the Congress gets the most current and accurate information and want to offer GAO's assistance and coordination in aid of that objective. With this in mind, my staff has begun discussions with key FAA staff in both the Air Traffic and Human Resource Management Divisions. Since the Congress will require data periodically to monitor FAA's progress toward meeting the Secretary's recently announced controller hiring initiative, this coordination should prove especially beneficial. We look forward to working with you.

CONTROLLER STAFFING

Question. Given the current state of your staffing are you saying that if you don't get 225 additional positions (less than one additional controller per facility), it will make the difference as to whether you can continue to operate the system as you are?

Answer. In order to provide an orderly transition from the current staffing to that which is needed to respond to the increased demand of traffic, the additional 225 will provide a continued smooth influx of new hires into the training pipeline. This will help offset the projection of increasing retirements of FPL controllers that should begin in 1990.

Question. Why don't you take a more long term approach to the controller staffing issue?

Answer. The new hires, which are placed in the training pipeline, take anywhere from 2-5 years to develop into FPL controllers. It is imperative that hiring continue so that a training pipeline can be maintained at a constant rate to provide a continuing supply of FPL's to offset attrition and provide for growth in the system.

Question. What are you concerned about?

Answer. We must maintain our training pipeline or we will find ourselves back in the same situation as today--with a shortage of FPL controllers because 2 to 3 years ago we cut back on hiring when we reached an overall CWF goal.

INCENTIVES FOR INCREASING STAFFING

Question. The report accompanying the FY 1987 Continuing Appropriation Act directed you to establish incentives to fill controller vacancies at understaffed centers and towers.

What has FAA done to implement this directive?

Answer. We have formulated a facility specific plan for the training, promotion, and transfer of controllers to ensure meeting the 60 percent goal. Additionally, we have set up a bi-weekly monitoring system to verify the progress of all facilities toward meeting the goal.

SUPERVISORS WORKING AIR TRAFFIC

Question. Considering the traffic levels, the shortages and the amount of time supervisors are working traffic instead of supervising, let me ask you:

Are you absolutely certain that the system is being so well managed that workload pressures could not reach the point that an inexperienced controller or even an experienced one might overreach, i.e., go beyond his or her capabilities?

Answer. The traffic workload of the system is constantly managed to ensure that traffic does not become unmanageable. We currently have temporarily promoted 160 FPL's to supervisory positions to bring our supervisor count to almost full strength. The air traffic system is managed nationally by the Central Flow Control Facility from Washington which can detect problems such as weather, equipment outage, and increased traffic. Flow Control will coordinate with the Traffic Management Units (TMU) which are located within each Air Route Traffic Control Center. The TMU manages the traffic to prevent overloads by coordinating with adjacent facilities as to the best solution to move the traffic safely and efficiently.

Question. What about the impact on the ability of supervisors to properly manage traffic flows so that controllers don't get overburdened?

Answer. It is the supervisor's responsibility to coordinate with the TMU to prevent an overload within their area of responsibility.

NEAR MIDAIR COLLISION AND OPERATIONAL ERRORS

Question. Last year there were 839 reports of near midair collisions - up from 758 in 1985. This year we have had 198 new midair collision reports and 307 operationl errors through March and we are just approaching the heavy summer travel period.

Do you believe that these after the fact indicators give us a good measure of the margin of safety?

Answer. In a proper perspective, these reports as well as others, can be used to evaluate the safety of the system and the compliance with system regulations and procedures.

Question. If not, what other operational indicators do you use to measure safety?

Answer. The ultimate measure of operational safety is the loss of human life.

Other operational measures include incidents such as accidents, pilot deviations, spill in/spill outs, flight assists, emergencies, operational deviations, military facility deviations, and bomb threats.

However, all operational measures must be viewed in the context of the overall activity level of the system, i.e., the number of aircraft using the system.

Question. How do these safety indicators influence the management of the system?

Answer. Evaluations of system components routinely result in procedural, regulatory, operational, and administrative changes.

Question. Give some specific examples.

Answer. An operational error on the surface involving an aircraft crossing a runway with another aircraft landing on the same runway illustrated the need for clarification in the phraseology used by controllers. The need was addressed by a change to Handbook 7110.65D, paragraph 3-81.

Based on operational error reports from O'Hare Tower, a position overlap procedure was developed for the local control position in July of 1986. Based on the positive results at O'Hare, the procedure was then tested at 27 additional towers throughout the country. Once again, the procedures proved to be useful, and we are now in the process of implementing the procedures in all air traffic facilities.

Question. Doesn't your current policy restrict the potential benefits of the collision avoidance system you are developing?

Answer. No. The airspace within a TCA should contain only that traffic which ATC has authorized. The airspace within an airport radar service area (ARSA) should only contain traffic of which ATC is aware. Also, in an ARSA, ATC provides traffic advisory service on a mandatory basis. Both of these aspects tend to somewhat reduce the need for reliance on collision avoidance equipment. However, the FAA has recognized that there is a significant threat to air traffic operating to and from a TCA but outside of the geographic boundaries of the TCA. It is in this area that the potential benefits of collision avoidance equipment can be realized. Understandably, the FAA has issued a regulatory proposal to require all aircraft operating below 12,500 feet MSL and within 30 miles of a TCA airport to be equipped with altitude encoding equipment.

TRANSPONDERS ON AIRCRAFT

Question. Concerning the matter of midair collisions, last year you told this committee that the midair collisions problem was essentially restricted to general aviation aircraft operating at low altitudes. I assume that tragedy in Florida during the week of April 26 is an example of that. However, you testified last month before the House Public Works and Transportation Committee that near midair collisions now increasingly involve air carriers or commuter aircraft and a general aviation aircraft. Do you agree with the position of the NTSB that we cannot depend on the "see and avoid" rule because of limitations in cockpit visibility and human reaction times?

Answer. Safe operations of the National Airspace System do not depend entirely on the "see and avoid" concept, though it does play an integral part in midair collision avoidance efforts. Experience has shown the value of having properly trained and alert flight crewmembers in the cockpit. To this end, the FAA is continually working with the air carriers and their training departments on visual scanning, clearing procedures, airspace description and procedures, traffic patterns, and current analysis of near midair incidents. We also have placed great emphasis on this subject with the general aviation community through the Accident Prevention Program and pilot seminars.

The FAA is presently reviewing existing requirements for altitude encoding transponders to determine if these requirements should be expanded in the National Airspace System. This has been a major topic of the Terminal Control Area design group and the National Airspace Review group. In this direction, the "Transponder-On" rule was implemented effective December 2, 1985, requiring all aircraft with transponders installed to have them turned on while operating in controlled airspace anywhere, not just in the present nine Group I terminal control areas and, also, to have the Mode C altitude encoding feature turned on if so equipped. Additionally, progress is continuing on the traffic collision avoidance system which is another major part of the midair collision avoidance program.

Question. Wouldn't it serve the interests of safety if all aircraft operating in radar controlled terminal areas were required to have an altitude encoding transponder and to use it?

Answer. Presently, all terminal radar systems have the capability to interrogate transponders with Mode C and to present this information on the controller's radar display. However, the density of traffic and complexity of traffic flows are the determining factors as to whether the increased safety benefits provided by requirement for aircraft to have altitude encoding equipment warrant the increased cost impact to aircraft owners. For example, such equipment tends to reduce the amount of two-way radio communications between pilots and controllers in requesting and responding to requests for altitude reports and reduces controller workload in the area of providing traffic advisory services. However, in moderate to light traffic density terminal areas, the workload is not that affected, especially in view of the voluntary equipage trends associated with altitude encoding equipment. Historically, mandatory use of Mode C equipment has been associated with airspace areas wherein its use is more clearly seen as having practical, added safety benefits to users, as well as efficiency benefits to ATC. Consistent with that application, the airspace areas were identified as terminal control areas, which contain the Nation's busiest metropolitan hubs, and the airspace above 12,500 feet MSL wherein aircraft move at closure speeds that equal or exceed the pilot's capability to see, react, and avoid collision. We have recently proposed to require Mode C in all airspace within a 30-mile radius of the primary airport in TCA's. This would expand the use of Mode C at altitudes below the TCA's shelves. In essence, these were seen as the areas most benefitted by mandatory use of Mode C and where its safety benefits outweigh the individual and public cost.

Question. Wouldn't this help reduce the possibility of a midair collision, especially one involving a passenger aircraft?

Answer. In major terminal areas, probably yes. In terminal areas with less traffic, it is less certain that Mode C would have significant added safety consequences.

Question. What is the basis of the FAA's policy that requires altitude encoding transponders in only terminal control areas?

Answer. The FAA also requires aircraft operating above 12,500 feet MSL to be equipped with altitude encoding equipment. This requirement is to help compensate for the reduced pilot ability to see and avoid other traffic. Pilots can request and receive traffic advisory service while operating in this airspace. However, the airspace in and in proximity to a TCA represents a high concentration of air traffic and complex air traffic flows. The air traffic conditions in these areas have the greatest need for positive and constant altitude information as well as a need to reduce pilot-to-controller radio communications concerning altitude information and traffic advisories. Significant costs without significant benefits would accrue to the bulk of this Nation's airspace users if such a requirement were injudiciously applied to expanses of both terminal and en route airspace areas now effectively served without such equipment.

Question. Are there any limitations in your equipment that would preclude expanding the requirement for an altitude encoding transponder to all radar control areas?

Answer. No, the terminal automation systems are either capable of handling the increased processing requirement or can be expanded to satisfy the demand.

Question. Wouldn't a much broader requirement for altitude encoding transponders allow all concerned to realize better protection?

Answer. As previously stated, a proposal that would broaden the requirement for altitude encoding transponders in the National Airspace System is being developed. The new requirements must be based on the density of aircraft operations in various airspace areas.

Additionally, recent major transponder/Mode C initiatives include:

FAA issued the Transponder-On rule, effective December 2, 1985. This rule requires that an aircraft with an operable transponder and operating in controlled airspace must have the transponder turned on to the appropriate code. Also, if the aircraft is equipped with Mode C altitude reporting equipment, it must also be turned on.

On January 29, 1987, the FAA issued a rule which requires automatic pressure altitude reporting equipment in Group II terminal control areas after December 1, 1987. Previously, altitude reporting equipment was required only in Group I terminal control areas.

FAA is developing plans for issuance of a notice of proposed rulemaking to expand use of Mode C altitude reporting equipment within and in the vicinity of terminal control areas. This effort is generated by recommendations made by a special FAA terminal control area review task group and approved by the Administrator as an agency action item in October 30, 1986.

BUDGET OVERVIEW

Question. You are requesting a total program of $5.8 billion (including $1.017 billion in contract authority for airport grants), an increase of almost $1 billion or 20% over the enacted FY 87 level. The Budget Resolution before the Senate, however, assumes a reduction of approximately $400 million below baseline for the programs and agencies within this Subcommittee's jurisdiction. The "assumption" for FAA, we are told, is a "freeze" at FY 87 levels. Whether this is a freeze at currently enacted levels or at a level adjusted for certain uncontrollables is not clear. In either case, the implications are very serious. You have expressed your general concern about the impact on your program in your statement. I'd like to take a few moments to have you give us a more detailed explanation of what this Budget Resolution - even assuming that FAA will be spared from the $400 million cut it mandates for our Subcommittee - will mean. Obviously, you will have to do without some elements of your planned program. What would you be willing to give up and what would you have to have under a freeze?

Answer. The impact of the Senate Budget Resolution will require stringent actions. Approximately 75 percent of the Operations appropriation funds are to pay for employees and 83 percent of those employees are engaged in the operation, maintenance and inspection of the National Airspace System. Of the remaining 25 percent for nonpersonnel costs, many vital and unavoidable requirements exist, such as for leased telecommunications in direct support of the air traffic control system, increased rental and utility payments for operating facilities, contracts for weather services and preparation of aeronautical charts and travel associated with inspection and maintenance that must be funded.

Under a freeze, we would have to have certain "must fund" increases such as personnel compensation adjustments for existing employees, GSA rental increases, and rate increases for leased telecommunications services in support of the air traffic control system.

In order to accommodate these "must fund" items, the following actions would be necessary:

- An agencywide hiring freeze, where new hires would be restricted to replacements for attrition in the controller, inspector, and maintenance workforces.

- Postponing the realization of hiring targets for specific workforces, such as controllers, inspectors, security specialists.

- No increase in controllers despite a 6-percent increase in traffic.

- Freezing the field maintenance workforce at a point when it is beginning to recover from the FY 1986 freeze.

- No increase in safety inspectors and security staff despite increasing workload requirements.

- Cutback in overtime essential to handling peak workload period requirements.

- A sharp reduction in permanent change-of station (PCS) relocations. This would quickly lead to a poor distribution of critical technical skills needed to replace retirements and promotions.

- Restrictions on travel associated with inspections and maintenance and on training.

- Reductions of nonpersonnel programs in the support area, i.e., ADP support for aviation safety.
- Furloughs of nine to sixteen for each FAA employee.

- Suspension or deferral of within-grade and merit promotions.

- Deferral of most agency initiatives including:

    - Long-range radar replacement program
    - Terminal doppler weather radar program
    - Pilot test of contract maintenance
    - Replacement of several obsolete control towers
    - The Advance Automation System
    - Several other major NAS Plan projects.

Question. What would be the impact on controller staffing?

Answer. The impact of having a "freeze" at FY 1987 levels would affect both the near term as well as the long term controller staffing. Some of the problems that could develop are: 1) reduction of the CWF to a level well below that which is congressionally mandated; 2) inability to safisfy the requirement of having 70 percent or the 60 percent at selected facilities of FPL's to those eligible; 3) decreasing the training pipeline giving us a problem in the outyears; 4) destroying morale within the controller work force; 5) altering the FSS consolidation process, and 6) decreased manpower would leave us unable to keep up with projected increased traffic.

Question. On Traffic Management personnel?

Answer. The effect on traffic management personnel would be furlough, reduction of personnel performing traffic management coordinator duties, increased traffic, i.e., workload and deteriorated morale.

Question. On aviation safety inspections?

Answer. We will be unable to do minimal level of inspections dictated by program guidelines and we cannot develop full scope of National Aviation Facility Inspection Program (NASIP) workload.

Question. On Flight Service Specialists?

Answer. We anticipate a minimum impact within this program. The worst case might require a furlough to make up the difference for annualized costs occurring in FY 1988.

Question. On aviation standards enforcement?

Answer. Enforcement activities are top priority items and would be least affected by cuts.

Question. On the field maintenance staff?

Answer. A freeze would restrict hiring to replacements for attrition. Other non-personnel maintenance costs such as special maintenance projects and various contracts would have to be postponed or curtailed.

Question. If we have to cut to stay within a freeze, where should we apply the knife?

Answer. It is very difficult to point out specific areas to "apply the knife" without knowing what the total resources available would be. We would rather have an operating level from which to review the FAA program as a whole and make specific reductions based on the highest priority programs that would ensure a safe operating system for the flying public.

You have pointed out that many National Airspace System (NAS Plan) projects are nearing the acquisition/installation phase. You have requested a 68% increase in facilities and equipment funding.

Question. What impact would a freeze have on your NAS Plan schedules?

Answer. A funding freeze would necessitate a total reevaluation of the current NAS Plan. A restructured NAS Plan as a result of the reevaluation would definitely reflect delays in implementation of improved air traffic control capability.

Question. Which projects would you be able to defer?

Answer. Selection of deferred projects would essentially be a process of choosing those projects which meet the following considerations: (1) Those projects whose deferral would not impact overall system safety, (2) projects that are independent in nature and are not central to the timely implementation of the NAS Plan, and (3) projects which are not implemented through existing contracts entered into with prior year facilitities and equipment appropriations.

Question. Which projects would absolutely have to go forward?

Answer. Projects that would have to go forward are those which are absolutely essential to safety, those which contain critical interdependencies within the overall NAS Plan, projects with fixed contractual increments, and those which generate maximum cost benefits to the system.

Question. What would the implications be for the overall integration of major NAS Plan components?

Answer. After a judicious delineation of "deferred" and "go forward" projects, it would be necessary to re-plan the implementation and transitioning of the entire NAS Plan program. Integration of all NAS Plan components would eventually occur, but differently than as now planned, with less cost effectiveness and less efficiency.

Question. Do you have a contingency plan for dealing with a funding short fall of this magnitude?

Answer. No.

Question. If so, please describe it. If not, why not?

Answer. The FAA is currently striving towards implementing a NAS Plan with a specific timetable for accomplishment premised on a certain level of financing. There is only one NAS Plan and the creation of such a plan is a costly and time consuming, complex activity. It is not practical to generate a series of NAS Plans at various levels of potential funding.

BUDGET OVERVIEW

Question. In your testimony of May 8, 1987, you mentioned your concern that we did not include funding for the Radar Training Facility enhancements in the F.Y. 1987 Supplemental.

If this facilitly is so important to the training of new controllers, why was it not included in your requested supplemental?

Answer. Due to the heavy influx of students as a result of our attempts to increase FPL levels in centers and ever increasing traffic levels, we became aware in early calendar 1987 that these two factors were combining in some centers to saturate the 9020 computers. Since the same computer is used for live traffic as is used for training, DYSIM (Dynamic Simulator) training was either slowed or stopped completely. Of course, this was happening in the centers with critical staffing needs. As a matter of fact, this was the reason for developing the Chicago Program.

Additionally, it was not until early calendar 1987 that positive indicators were being observed as a result of the Chicago Program being conducted at the RTF.

Therefore, when the 1987 Supplemental was submitted, the FAA did not have the results of the Chicago Program nor the urgent need for RTF services.

Question. Last month Secretary Dole announced that she has "directed" FAA to take several actions to improve airport security in this country. She said DOT had found security weaknesses in:

-- Control of airport access;
-- Employment verification of airport personnel;
-- Maintenance and control of gates and fencing; and
-- Procedures permitting access to aircraft.

How serious are these weaknesses? Why did it take a special task force to discover them?

Answer. The Secretary of Transportation established the special task force in 1986 to conduct an indepth review of the domestic aviation security system. The Secretary noted that the system was working well but that there could be steps that should be taken to provide an even higher standard of protection to the traveling public.

The task force did not find any "weaknesses," but did make several recommendations for improvements in the cited areas. The special task force provided a fresh look from a different prospective and, as a result, was of material assistance to the FAA in achieving the desired higher level of security. It should also be noted that FAA was a full participant in the task force, providing expert assistance.

QUESTION: Why are there such significant weaknesses at Dulles and what are you doing about it?

ANSWER: Prior to issuance of the House Government Operations Committee report, the FAA had already initiated action addressing the security concerns identified at Dulles Airport. A new computerized security card system has replaced the previous system and training for both airport police and the preboard screeners hired under contract by the airlines has been upgraded. The FAA is preparing a full report responding to the House Committee that covers in detail the security improvements implemented at Dulles Airport. Security at Dulles is now considered to be very good.

Question. Are there sufficient funds in your fiscal year 1988 budget to continue development of the new vapor detection X-ray, and thermal neutron devices at the fastest feasible pace? If not, how much additional would be required to accelerate this development?

Answer. There are sufficient funds in the fiscal year 1988 Research and Development Program on explosive detection to allow the continued accelerated development of a vapor detection portal for screening people and the refinement of the thermal neutron activation (TNA) prototype for screening checked baggage and cargo. In addition, the development of a dual sensor (X-ray and TNA) detection system for baggage and cargo will continue on schedule. There are certain aspects of each of these programs which could be further accelerated. For instance, parallel efforts on several vapor detection methods could be pursued with greater urgency, and now unfunded options in the TNA and dual sensor areas could be addressed.

Additional funding would be allocated in the following areas relating to explosives detection:

1. Vapor Portal Detector
2. Vapor Screener for Carry-on Baggage
3. Alternate Vapor Detectors
4. Alternate TNA Neutron Sources

5. Dual Sensor Prototype
6. New Technology Development

It is estimated that an additional $5 million would be required for development at the fastest feasible pace in fiscal year 1988.

COMMUTER AIRLINE SAFETY

Question. Poor training procedures by commuter airlines have been identified as contributing causes for several recent accidents. Training and testing requirements for commuter airline pilots and copilots are less stringent than those FAA has for major airlines. What is FAA doing to improve commuter airline pilot training and proficiency?

Answer. The FAA has initiated a regulatory project to review the training program requirements for commuter air carriers. The objective of the review is to determine if a more comprehensive, standardized approach to training is needed. Additionally, since July 1986, the FAA has required periodic (annual) instrument proficiency checks for all second in command pilots flying for commuter air carriers. The FAA also issued guidelines to its field offices emphasizing that commuter pilots must pass competency checks that include the maneuvers and procedures necessary for the original issuance of the pilot certificate required for the type of aircraft used and the operations involved.

Concomitantly, the FAA and the Regional Airline Association have been working together to develop ways of enhancing training and safety through the use of advanced training devices. During March 1986, the FAA published for public comment a proposed advisory circular dealing with the use of airplane advanced training devices for commuter pilot training and checking. This advisory circular provides an additional method by which an air carrier may accomplish a substantial portion of its pilot training and checking. The intended benefit of using an advanced training device is to increase the quality of training and checking without using either the airplane or a sophisticated flight simulator. The FAA has reviewed the public comments, and the advisory circular is now in final coordination for publication.

Question. Why doesn't the FAA require ground proximity warning systems for turboprop commuter aircraft seating 30 or fewer passengers?

Answer. The FAA has initiated a project to develop a notice of proposed rulemaking proposing to require installation and use of ground proximity warning systems in commuter aircraft operated under Part 135 of the Federal Aviation Regulations. The applicability of the proposed rule is currently being developed. The notice will address turbine powered commuter aircraft. The specific number of passenger seats to which it will apply has not been decided.

AVIATION SAFETY INSPECTION PROGRAM

You state that your request for an additional 178 Aviation Safety Inspectors and 50 support positions will bring you up to a total of 2,198 inspectors, the highest level you ever had. I assume this is the number you think you need.

Question. By the end of FY 1988, however, you expect the number of inspectors on board to drop to 2,088 is that correct?

Answer. The correct number of inspectors we expect to have on board by the end of FY 1988 is indeed 2,088. However, this represents an increase of 169 inspectors above the end of FY-1987.

Question. How many inspectors do you have on board now?

Answer. As of April 30, 1987, there were 1,782 inspectors on board.

Question. Why do you expect to end up with fewer inspectors than you say you need by the end of FY 1988?

Answer. Our goal for the end of FY 1988 is to have 2,088 inspectors on board (95% of authorized) which represents an increase of 8.8% or 169 positions.

Question. The GAO has been highly critical of your management of the safety inspection program. For example, GAO found that you did not know how many inspectors at any one time were assigned to commercial airlines, commuter airlines, or private and business aircraft. Have you corrected this problem?

Answer. As of April 30, 1987, there were 731 air carrier inspectors and 1,051 general aviation inspectors on board. Management of safety inspector staffing is accomplished by applying a detailed staffing standard. The distribution of positions between the air carrier and general aviation options and between operations and airworthiness specialities is based on formulas contained in the standard. The positions requested in FY-1988 will be distributed based on these staffing standard formulas. When full staffing levels are reached, the allocation of positions between air carrier and general aviation in the regions should reflect the percentages contained in the staffing standard. Safety inspector staffing management is an area examined in conjunction with the Flight Standards evaluation program. With regard to reporting staffing statistics, the Office of Management Systems is developing a program to produce explicit safety inspector staffing reports from the Consolidated Personnel Management Information System, which is the agency's computerized personnel data base. The new program will increase the accuracy and timeliness of staffing reports.

The NTSB Chairman has testified that NTSB had made a number of recommendations over the past several years concerning your surveillance activities. He stated that of the closed recommendations, in some cases you did not take acceptable action and other recommendations remain open.

Question. Regarding your airline surveillance, are there currently any open NTSB recommendations?

Answer. There are eight open NTSB recommendations regarding airline surveillance.

Question. If so, what are they and why are they open?

Answer. The NTSB Recommendation and status of each open safety recommendation are as follows:

A-78-37. Revise the surveillance requirements of commuter airlines by FAA inspectors to provide more stringent monitoring.

The FAA notified the NTSB in a letter dated June 25, 1980, that Notice 8000.176, Increased Surveillance for Operators Under New Part 135, was issued to provide for increased surveillance. Spot inspections on all Part 135 were included in this program. On May 30, 1980, the FAA issued Notice 8000.198 which extended the provision of Notice 8000.176 until December 1, 1980. The FAA notified the Board that it considered its action to be completed. There has been no formal classification by the NTSB of the status of this recommendation since 1980.

Since the FAA's letter dated June 25, 1980, there have been additional projects initiated to address the surveillance of commuter airlines. New work program guidelines (Action Notice 1800.1), which provide increased surveillance on air taxi/commuter operators, were used in 1985. In addition, the National Aviation Inspection Program was initiated and both commuters and larger air carriers are scheduled for indepth inspections by special selected teams of inspectors. At the present time, a major revision to the inspector handbook is in progress which will provide new guidance to the inspection force in field offices. This should be completed by 1988.

A-78-38. Identify FAA offices responsible for the surveillance of large numbers of air taxi/commuter operators and insure that an adequate number of inspectors are assigned to monitor properly each operator.

The FAA's inspection work force has increased since 1984 through new hires and increased authorized staffing which has provided increased monitoring of air taxi/commuter operators. Since 1984, the FAA has hired 592 additional inspectors.

The FAA notified the NTSB in a letter dated June 25, 1980, that it considered its action to be completed on this recommendation. There has been no formal classification by the NTSB of the status of this recommendation since 1980.

A-78-39. Review the flight operations and training manuals of all commuter airlines to insure that the requirements of 14 CFR 135 are met and practiced.

The FAA notified the NTSB in a letter dated June 25, 1980, that all flight operations and training manuals were reviewed during the air taxi recertification to ensure that they met the requirements of 14 CFR Part 135. This project was completed December 1, 1979. There has been no formal classification by the NTSB of the status of this recommendation since 1980.

Since the FAA's letter dated June 25, 1980, work program guidelines have been updated which will provide increased surveillance of commuter operations and training. Also, the hiring of additional inspectors will ensure better compliance by these operators.

A-80-50. Issue an Advisory Circular, or by other appropriate means, advise operators of specific illustrations of failures and malfunctions which should be reported to the Service Difficulty Reporting Program under the provisions of 14 CFR 121.703(c) and 14 CFR 135.415(c) regardless of the phase of ground operation or flight at which they occur, and, as a minimum among those illustrations, include propeller malfunction, inadvertent autofeather systems activation, and engine component structural failure.

A-84-8. Provide FAA air carrier inspectors, for use in their surveillance activities, failure trend information based on airline maintenance data which have been reported by airlines, and analyzed and ranked by the FAA for their significance on flight safety.

The FAA's Service Difficulty Reporting Subsystem of the Aviation Safety Analysis System is currently being enhanced to permit field entry of report information. The Aviation Standards National Field Office has developed a draft program to provide service difficulty trend information to field inspectors for use in their surveillance activities. This draft program is now receiving FAA coordination, and it is anticipated that this program will be completed this year.

A-84-9. Require the Federal Aviation Administration's principal maintenance inspectors to document and report periodically on the effectiveness of FAA-directed actions to correct deficiencies detected during surveillance activities.

The FAA believes that the guidance contained in the current Airworthiness Inspector's Handbook, Order 8300.9; The Service Difficulty Reporting Handbook, Order 8010.2; Maintenance Bulletins, Order 8340.1A; and Action Notice 8300.58, Special Field Reporting Requirements and Followup of Corrective Action, provide a complete and adequate reporting system for all air carrier aircraft. Also, the regulatory requirements of 14 CFR 121.703, 121.705, 135.415, and 135.417 provide a sufficient data base for airworthiness inspectors to followup on inservice problems and trends.

A-86-110. Until the objectives and goals of the Safety Activity Functional Evaluation program are fully realized, establish and require, as an interim measure, a minimum level of direct surveillance, in terms of required tasks as well as personnel levels, to adequately oversee commuter air carrier operations.

The FAA, through the national work program, presently provides guidance to its field offices on the types of inspections to conduct. This program establishes and requires a minimum level of direct surveillance for commuter air carrier operators. A review and update of this program in accordance with industry requirements is planned. The Board is kept apprised of the status of the FAA's actions on this recommendation.

A-86-111. Develop and issue guidelines to Air Carrier District Offices to provide for a minimum level of continued direct surveillance of commuter air carrier operations when the Principal Operations Inspector is occupied with other duties for extended periods of time.

The FAA sent a letter to all regional Flight Standards division managers regarding commuter air carrier surveillance during principal operations inspectors' extended absence. The letter requests that Flight Standards district office managers be notified that during any extended period of time the principal operations inspector is unable to conduct the required surveillance on commuter air carriers, the office manager assure that someone is assigned these duties. The letter also requests that office managers conduct periodic reviews of all commuter air carrier surveillance. A copy of this letter was provided to the NTSB on May 5, 1987. The NTSB has classified this recommendation as "open--acceptable action" pending their review of this letter.

Question. Regional airlines seem to be experiencing a very high rate of pilot attrition as pilots from these smaller airlines move on to the larger ones. NTSB, citing recent accidents, including those of Bar Harbor Airlines and Henson Airlines, has stated that such rapid turnover of pilots is a problem. Do you view this as a problem and, if so, how are you addressing it?

Answer. To date, FAA has no evidence from accident data, inspector surveillance, or other sources that this is a safety problem. There is no documentation of a decrease in the level of crewmember performance. Because of concerns expressed by NTSB, Flight Standards managers have been instructed to ensure that air carrier training and qualification activities receive regular, comprehensive FAA surveillance.

Question: Since 1981 how many monetary penalties have been levied, how many certificate actions have there been against airlines and industry personnel?

Answer: The approximate number of closed civil penalty and certificate actions against air carriers and others, since January 1, 1984*, by FAA Regions, follows:

New England	AIR CARRIER	OTHERS	
CP	35	187	
Cert	6	486	
	41	673	
Eastern			
CP	115	200	
Cert.	11	437	
	126	637	
Southern			
CP	98	505	
Cert.	8	1370	
	106	1875	(1/1/85 to Present)
Great Lakes			
CP	134	661	
Cert.	49	857	
	183	1518	
Central			
CP	90	597	
Cert.	16	559	
	106	1156	
Southwest			
CP	231	823	
Cert.	71	1422	
	302	2245	
Northwest Mountain			
CP	105	625	
Cert.	10	617	
	115	1242	
Western Pacific			
CP	224	1258	
Cert.	42	2800	
	266	4058	
Alaska			
CP	54	187	
Cert.	20	486	
	74	673	
TOTAL	1,319	14,077	

* Enforcement data prior to 1984 not available through enforcement information system (EIS).

AVIATION TRUST FUND

Question. You indicate that your spending plan will reduce the uncommitted balance in the Airport and Airway Trust Fund to about $5.6 billion by the end of fiscal 88. The Committee understands the uncommitted as of the beginning of March was about $5 billion. So it looks like the balance is going to continue to increase for the time being. What accounts for this large uncommitted balance?

Answer. The FAA estimates an uncommitted balance of $5.6 billion at the end of FY 1987, which will decline to $4.8 billion by the end of FY 1988 with the spending levels outlined in our proposal. This larger than expected balance has resulted principally from the shortfalls in appropriations below authorized levels, which have in turn triggered the F&E penalty clause, reducing operations funding from the Trust Fund. From FY 1982 through FY 1987, F&E appropriations have been $1.7 billion lower than authorized levels. As a result of these lower than expected F&E and slightly lower AIP appropriations, the operations funding from the Trust Fund has been $3.2 billion lower than if appropriations equaled authorizations since 1982.

Question. You have recently been quoted as saying that capacity constraints are primarily due to a lack of "concrete", i.e., inadequate airport space. Your original request to the Department for the Airport Improvement Program was an obligation limit of $1.1 billion. The Administration cut that to $1.017 billion. In contrast, the Airport Operators Council International and the American Association of Airport Executives are recommending $1.8 billion for airport grants. How does your proposed reauthorization legislation address the airport capacity problem?

Answer. The grant program was restructed to allow an expanded discretionary fund (43% of total grant funds available) which can target a significant amount of funds at commercial service and reliever airports. This structure will provide 33% of the total grant program (or approximately $335 million) as an expanded discretionary fund to be used only for projects that will preserve or enhance airport capacity and which have a critical impact on national system performance.

Question. Specifically what sorts of projects would yield the most benefit in terms of increased capacity?

Answer. Typical projects which would ~~likely~~ be funded include: new runways, new taxiways, and expanded apron and aircraft holding areas to prevent severe airport ground congestion during peak arrival and departure periods. As opportunities arise, funds will be used to assist local sponsors in developing new commercial service airports or to assist the new developing tier of "airline hubbing" airports. Under the Administration's proposal, noise mitigation projects would be eligible for funding from the capacity discretionary fund if such work could relieve or avoid capacity constraints. Where development and expansion of reliever airports will add system capacity, these discretionary funds could be used to assist in construction and improvement of important reliever airports.

Question. Would these improvements be implemented at the "22" so called "pacing airports" or elsewhere?

Answer. While our proposed legislation would allow any large commercial service (primary) airport or reliever airport to compete for capacity discretionary funding, the statutory requirement for a performance-based methodology for defining project priorities based on each proposed project's impact on overall national air transportation system capacity will influence the type of airports that can effectively compete. Generally, we believe highest priority consideration should be given to airports that are or will be congested, including the 22 pacing airports.

Question. Does your request provide sufficient funds to accomplish what you believe is needed.

Answer. The FAA determined that the $1.017 billion annual level was an adequate amount to maintain the safety and security of the national airport system and to allow a significant level of funding, approximately $335 million annually, to be targeted at the priority capacity enhancement projects having systemwide benefits. This level is approximately the same as that provided by Congress in its fiscal year 1987 Airport Improvement Program appropriation limitation. While we are aware that over-all eligible systemwide development needs exceed this level, the Federal airport grant program historically has not fully funded airport capital development. The combination of local, state, and airport users are also significant sources of funding. The $1.017 billion annual level recommended continues this same approximate proportion of Federal airport program support.

Question. Currently, 50 percent of your airport grant funds are distributed by formula to the large commercial service or primary airports. Under your proposed reauthorization legislation these airports would receive by formula only 35 percent of the total funding. What is the reason for this change - aren't these the airports that have or could have capacity problems?

Answer. The reduction in the entitlement level from 50% to 35% was done to help create the large capacity discretionary fund. The ability to target significant amounts of money at priority capacity projects which have system-wide benefits has greater potential to reduce overall system delays. Therefore, the percent reduction in individual entitlements to create the expanded discretionary amount was determined a preferred approach. In cumulative, the funds would still be available for use at large commercial service airports and their relievers.

Controller Overtime

Question. You are estimating a substantial reduction in controller overtime.

What is the basis for this projection?

Answer. The estimate is based on the fact that the controller work force is continuing to grow, and the proficiency of the controllers is increasing.

Question. Provide for the record a table comparing your estimates of overtime with actual overtime for fiscal year 1981-1986?

Answer. The following table depicts estimates as shown in the Congressional budgets versus actual usage by option:

CENTERS	Estimate		Actual	
	Hours	Amount	Hours	Amount
1981	**	**	313,410	$ 8,973.5
1982	**	**	977,289	30,573.6
1983	749,629	26,481.0	689,453	22,350.5
1984	621,688	20,845.2	672,559	21,169.9
1985	476,725	15,138.2	615,037	19,004.8
1986	585,125	18,906.0	393,793	12,719.5

TOWERS	Estimate		Actual	
	Hours	Amount	Hours	Amount
1981	**	**	418,616	$10,249.0
1982	**	**	842,590	22,619.2
1983	785,115	23,736.0	469,407	13,143.4
1984	395,980	11,230.0	383,288	10,066.2
1985	338,608	8,495.9	292,909	7,724.8
1986	293,870	7,838.0	227,503	6,067.5

** Information not available.

AERONAUTICAL CHARTS & MAPS

Question. In P.L. 99-190, Congress provided a mechanism to facilitate the conclusion of indemmnification agreements between publishers of aeronautical charts and maps and the United States Government. To date, the Federal Aviation Administration has not issued implementing regulations. What is status of the rulemaking and the reason(s) for delay in promulgating the regulation?

Answer. The regulations have been drafted by the Office of the Chief Counsel. However, the regulatory evaluation, which includes an economic impact analysis, has not been completed by the Office of Aviation Policy.

Question. When will the regulation be promulgated?

Answer. We anticipate forwarding the completed package to the Office of Management and Budget by the end of September.

AIRPORT CAPACITY/N.J.

Question. You recently wrote the Governor of New Jersey, among others, offering "all the help" FAA can provide in finding ways to expand airport capacity in my State. You note, in your letter, that "The Federal role in developing airports has limitations. The selection of sites and the development of an airport are State and local matters. The Federal Government, however, does have funds available for States to develop studies which address the crucial problem of building airport capacity within its boundaries". Has the Governor replied as yet?

Answer. No.

Question. Does New Jersey now have a plan for addressing the capacity problems you describe?

Answer. The Newark Airport does have an airport capacity task force underway. Representatives from the FAA, The Port Authority of New York and New Jersey, the airlines, and others are studying new airspace procedures, new systems and equipment, and airport development projects at Newark to increase airport capacity.

Question. Has FAA discussed these problems with New Jersey officials prior to your letter?

Answer. Yes, primarily in the airport capacity task force forum.

Question. Are you conferring with New Jersey Officials at present?

Answer. The FAA confers with the Port Authority on all airport issues concerning Newark Airport particularly the current capacity problems on a regular basis.

Question. What kinds of assistance are you prepared to provide to help New Jersey meet this need?

Answer. The FAA stands ready to help New Jersey and the Port Authority obtain grant money for airport capacity planning studies and associated projects. For example, in Fiscal Year 1987, grants were awarded for the Newark Airport for the following projects: extend and construct taxiways; rehabilitate taxiways; and, install runway centerline lighting. These and other similar projects totaled $10.8 million in Federal grants.

DOT OVERSIGHT

Question. What is your view of the nature and scope of oversight being exercised by the Office of the Secretary over FAA?

Answer. The FAA is one of the nine major governmental organizations which are overseen by the Office of the Secretary. The FAA is subject to approximately the same degree of Secretarial oversite as other organizations. Generally speaking, the nature and scope of Secretarial oversight exercised over the FAA is appropriate.

Question. What kinds of changes, if any, are needed to help FAA accomplish its mission more efficiently, effectively and economically?

Answer. Although fine-tuning of the relationship between the Office of the Secretary and the FAA will always be occurring, reflecting the general governmental environment and the evolution of the FAA's programs, no major reforms are needed at this time. The present DOT-FAA relationship is sufficiently flexible to accommodate change and maximize productivity.

Question. What is your view of the proposal under consideration to remove the FAA from DOT and make it a separate entity?

Answer. The present organizational structure of the FAA has been mandated by Congressional legislation and in that sense we do not believe it is appropriate to strongly advocate any particular scheme. The inclusion of the FAA as a modal administration in the Department of Transportation permits an integration of policy and resource allocation decisions with full consideration of the entire spectrum of transportation modes. On the other hand, as with any organizational entity, the more independent the organization is, the greater its flexibility in initiating actions, and dealing with its constituency.

AIRLINE DELAYS

Question. It has been reported that the method used by FAA to count delays does not include other causes for delays faced by airline passengers. Those other causes include mechanical problems, late arriving food service, crews, and connecting flights.

Is this report accurate?

Answer. Yes

Question. If so, what is your justification for not including all factors or contributing causes so that a complete accounting is available?

Answer. The FAA does not count delays the way airlines do (i.e., not just ATC, but late crew, late passengers, technical problems, etc.).

The current categories of delay accounting meets the FAA's need to track and manage the air traffic control system.

Question. What is your goal for reducing delays (as FAA counts them) for fiscal year 1987?

Answer. The FAA's goal is a 2 percent reduction from the 1986 delay level representing a substantial reduction in delays for 1987 considering a 3.5 percent projected increase in air traffic.

AIR TRAFFIC CONTROLLER STAFFING

Question. The Continuing Appropriations Act (P.L. 99-591), Section 331, requires that of those individuals eligible to be full-performance-level (FPL) controllers, 70 percent shall have achieved that status by September 30, 1987.

For purposes of complying with this requirement, which types of employees are considered to be "eligible" to be an FPL controller?

Answer. All GS-2152's in the controller work force are considered eligible to be FPL controllers.

Question. Do you expect to meet the statutory requirements for FPL's at level 3 and above terminals and all centers?

Answer. We will meet the requirement in all but 5 facilities.

Question. If not, identify those not meeting the requirements and the reasons why?

Answer. The facilities we do not expect to reach our goal are Anchorage Center, Chicago Center, Indianapolis Center, Oakland Center, and Akron Tower. These facilities have increased their controller work force which has caused a distortion of the FPL ratio.

Question. Does FAA believe that any special legislation is needed to help FAA achieve and sustain controller staffing levels in certain areas of the country?

CONTROLLER WORKLOAD/AIR TRAFFIC

Question. In its report on controller staffing in March 1986, GAO recommended that you impose restrictions on air traffic because of the shortage of FPL controllers. GAO reiterated this recommendation in its testimony of May 7, 1987, before this committee because the safeguards to preclude controllers from being overburdened were not in place. Also, the Chairman, NTSB recently recommend similar action.

What is your position with respect to the merits of the GAO testimony in support of its recommendation of May 7, 1987?

Answer. Our traffic management system (TMS) imposes restraints on users of the air traffic control system in a dynamic manner based on real-time capacity limitations. Consideration is given to existing/forecasted weather, airport conditions, equipment problems, and local facility capacity before restrictions are implemented or removed to ensure utilization of available resources is within prescribed safety margins.

In 1986, delays reached an all-time record high of 417,644. The FAA took aggressive steps, where operationally feasible, to ensure that the air traffic system was made fully responsive. To that end, we gathered more than 130 managers of our key facilities at a National Traffic Managemet Conference in February 1987 to collectively plan strategies for improving system efficiency within existing resource limitations. This exercise in participative management resulted in a systems approach to the application of traffic management within the air traffic system.

Question. Under what conditions would some form of restrictions be called for over and above current flow control restrictions?

Answer. There are no fixed air traffic control restrictions. The safety of air traffic operations is always foremost in our planning as we match system capacity to system demand. National flow management is accomplished on a real-time minute-by-minute basis in consonance with individual facilities. Adjustments to the system are made on a tactical basis that results in system flexability to adjust to any unplanned situation.

CONTROLLER TRAINING

Question. What impact has the expansion of the use of contractor personnel to provide training had on the morale of the controllers?

Answer. This action had a negative impact on the morale of the controllers, because they believed it had, to a degree, limited career progression opportunities.

Question. Would the inclusion of first line supervisors and traffic management coordinators in the definition of the controller work force reduce the need to contract for training personnel?

Answer. It will reduce the need to find sources of FPL's from among our various staffs. However, without careful analysis, we cannot say whether inclusion of first line supervisors and traffic management coordinators will produce sufficient numbers to reach Congressional mandates.

Question: Is this really the most-effective manner to conduct your controller training and even if it is, doesn't it concern you that you are losing your in-house training staff?

Answer: We consider that the current AT instructional services contract is about comparable to the cost of an in-house staff instructor. We would certainly be concerned with the loss of in-house staff if we could not augment the staff with qualified contract instructors who have the technical expertise.

Question. Your fiscal year 1987 Supplemental request would fund your existing contracts for Air Traffic Control training instructors until September 30, 1987, but the contracts actually run until the end of the current calendar year.

Is this correct?

If so, how much does your fiscal year 1988 budget include for the existing contracts and if you are planning on continuing this contract training in calendar year 1988, how much is included in your 1988 budget for that purpose?

Answer. Yes, the contracts actually run until the end of the current calendar year. $14.7 million is contained in the 1988 budget for the purpose of funding the contracts in FY 1988.

FIELD MAINTENANCE TECHNICIANS

Maintenance technician staffing has been reduced to a "critical levels"; however, you are not proposing any increase in field maintenance positions for fiscal year 1988.

Question. What is the current situation regarding your field maintenance staff and will you have a sufficient number of technicians in fiscal year 1988 to properly maintain the increased number of facilities?

Answer. We have requested no increase in field maintenance staffing for FY 1988. The reliability of NAS equipment remains at a high level and Airways Facilities continues to have a highly experienced, well trained, and multiskilled work force. For these reasons, we feel that our current level of 9,278 positions is sufficient to provide the required level of service for the NAS equipment. We do, however, recognize the potential of increased retirements eroding this experienced work force in the future.

Question. Is your budget request consistent with your field maintenance workload as projected by your staffing standard?

Answer. The staffing standard application that we used to develop the FY 1988 budget submission was based on the NAS Plan equipment delivery schedule as of June 1986 that indicated a requirement for a field maintenance staffing level of 9,340. Since the staffing standard is statistically accurate within ± 5 percent or approximately ± 470 positions, we feel our request is well within these limits.

Your budget (p. 69) assumes the reduction of 80 full-time equivalents from management initiatives.

Question. What are these initiatives?

Answer. We expect to achieve the reduction of 80 FTE's by streamlining the Systems Maintenance organization. We will examine organizational characteristics such as overhead functions and positions, supervisor to employee ratios, and others.

Your fiscal year 1988 budget includes a $15 million increase for the initial funding of a pilot test of contractor maintenance.

Question. Would you elaborate on what this test will involve, what the total cost will be, and the extent to which you intend to use contract maintenance as an alternative to hiring additional maintenance personnel?

Answer. This contract will provide maintenance service for facilities at selected airports within the Great Lakes, Eastern, and Southern Regions that have either no towers or Level I or II VFR towers. None of these services involve radar of air traffic control automation facilities.

The proposal has not been put forward as an alternative to hiring more in-house technicians. If cost considerations ultimately justify it, the contractor would take over maintenance activities that are conducted now by Government employees. This would allow us to reassign a number of our existing staff to cover FAA maintenance requirements at other more critical locations.

Since this would be a competitively-bid contract if we proceed with the program, we do not believe it to be prudent to precisely specify the expected contract cost to you through this means. We will be pleased to provide that to the committee on an off-the-record basis, if you desire.

Last year this Committee requested FAA to submit an assessment of "realistic maintenance staffing needs" in this budget request. The GAO reviewed your request as part of its ongoing review of field maintenance staffing, and informed us that your request understates actual staffing needs.

Question. Are you satisfied that your request does represent a realistic assessment of your needs? Explain why?

Answer. Yes, I believe that the funded employment for FY 1988 is sufficient to maintain the current level of service for FAA's critical safety equipment. My confidence is based on the fact that reliability of NAS equipment remains at a high level and that our field maintenance organization has a highly experienced and dedicated work force. However, I do have concerns about the potential of increased retirements eroding this work force in the near future. We are experiencing staffing imbalances at certain sites which are being satisfied by increased overtime, hiring new technicians, moving current technicians from other locations, or adjusting workload assignments and/or coverage for a limited number of facilities. Any reductions to our proposed FY 1988 staffing would jeopardize our ability to maintain these critical facilities.

ADVANCED AUTOMATION SYSTEM

The budget includes $180 million under Facilities and Equipment for your Advanced Automation System. You are also requesting $7 million under Research and Development to fund in-house support personnel.

Question: How will the $180 million be allocated among these activities: continuing the design phase, beginning the acquisition phase, and developing the Technical Center simulation facility?

Answer: The $180 million requested provides $115 million for the design competition phase, $45 million for the acquisition phase, and $20 million for FAA Technical Center simulation facility development (AERA laboratory).

Question: Does the budget request provide adequate funds to continue the design phase in a cost-effective manner, including the demonstrations specified in our letter of March 16, 1987?

If not, how much more money will be needed?

Answer: The budgeted amount of $180 million will cover the completion of the design competition phase of the Advanced Automation System.

We have been concerned about the AAS program for several years, particularly with your acquisition strategy, which calls for a concurrent development and production phase. Both our Committee and the House Appropriations Committee have called for additional Initial Sector Suite System (ISSS) and AAS risk reduction and demonstration efforts before awarding the acquisition phase contract, additional AAS testing before authorizing workstation production, and several reviews and analyses. These directives preserved your flexibility to:

(A) Meet your current deployment schedule by restarting Area Control Computer Center (ACCC) software design during the design phase, or

(B) Delay deployment by deferring workstation production until adequate ACCC test results become available.

Question: Which course of action have you chosen.

Answer: The changes recommended by the House and Senate are being incorporated in the AAS program. Tasks are being added to the design competition phase contracts to reduce the risk associated with the use of Ada programming language, performance of the local communications network, and design for fault detection and recovery. Additional software design for the ISSS is also being added to the design phase. The acquisition phase will include additional testing of controller consoles before authorizing full production.

We have asked you to complete a technical risk assessment and to use the results to develop a formal plan identifying other risk reduction measures for the remainder of the design and development process.

Question: What is the status of this plan and what other risk reduction demonstrations have you identified that should be conducted during the design phase?

Answer: We have completed the risk assessment plan for the design competition phase and acquisition phase that was directed by the House and Senate Committees. The report is in coordination in FAA. Risk reduction demonstrations are included in the design competition phase to: evaluate local communication network performance; evaluate Ada compiler performance; demonstrate use of Ada in programming some real time programs, and demonstrate some aspects of fault detection and recovery performance.

Your current plans regarding AERA development appear to call for an acquisition phase contract award without AERA simulation results. A 1981 Rand Corporation study points out the need for interactive and dynamic simulations before committing to the AERA concept and the GAO has reinforced this recommendation. Your budget requests additional funds to begin constructing a stimulation facility at the Technical Center. This facility will be used to simulate AERA functions but it appears as if the results will not be available before the AAS contract is awarded. You have been asked to make a special review of the need for more complete AERA simulations before entering into the acquisition phase.

Question: Have you done so?

Answer: We have reviewed the need for more complete AERA simulations before entering into the Acquisition Phase.

Question: Please describe how you plan to proceed with AERA?

Answer: AERA 1 software will be developed by the AAS acquisition phase contractor and implemented as part of the final configuration of the Advanced Automation System. Development and evaluation of AERA 2 effectiveness will be done in parallel with AAS development, using FAATC simulation laboratories. AERA 2 will be implemented as an enhancement to AAS software after operational validation at FAATC simulation facility.

The architecture for the Advanced Automation System has been designed to accommodate the future implementation of AERA 2 and 3. We believe there is no practical reason to hold up on the acquisition phase award until the simulation facility is complete. Doing so would delay program several years without any tangible benefit.

Question: Would you summarize the results of the cost/benefit analysis and the technical risk assessment?

Answer: Preliminary results of the benefit, cost and risk analyses requested in House Report 99-450 regarding our fiscal year 1986 budget are available and are under review within the FAA. Following this review, the study will be updated and the final documented results are scheduled to be completed in December 1987.

The FAA has completed its studies of the risks associated with the AAS program. A report summarizing the program risks and the associated risk management plans will be completed in June 1987.

Question: What, if any, improvements to the AAS program and acquisition strategy are indicated?

Answer: The AAS program and acquisition strategy have been revised substantially in response to concerns expressed by the Committees. The replanned program has been submitted to the Committees and we believe it now represents a practical and achievable program. No further improvements are planned.

The original AAS contract called for a 35-month design phase at a total cost of $247 million. Although you were cautioned not to award the AAS design phase contract until your system requirements were adequately defined, requirement changes during the first year increased costs about $150 million and extended the schedule 6 months. Since your testimony last spring, several additional cost, schedule, and technical problems have come to light, resulting in an additional schedule extension and further significant cost increases.

Question: What caused these problems?

Answer: The original AAS contract cost estimate was $247 million over 35 months. This has now grown to approximately $500 million over 46 months. Most of the growth was due to under estimation of program complexity. However, some of this growth was due to engineering changes such as the addition of color to the sector suite. In addition, several risk reduction tasks have been added to the design competition phase.

Question: What would the design phase cost and schedule impacts have been had you not reduced the contract scope?

Answer: If the scope of the design competition contracts had not been reduced total costs were projected to reach approximately $535 million, prior to the addition of the risk reduction tasks.

Question: How much would the cost to complete the original contract scope have been?

Answer: The cost to complete the original design competition phase contracts, without adding AERA 1 functions, VSCS interface, risk tasks, or color displays to the scope of work would have been approximately $398 million.

Question: Why did you not give any indication of these problems during the testimony given last April when by June or July the program was generally regarded as having encountered severe problems?

Answer: Last year FAA estimated that the AAS design contracts would cost $369 million, an increase of $122 million over the original contract award. After we testified last year, FAA initiated a detailed evaluation of the AAS program. This resulted in a replan that constrained further cost growth and reduced risks of the program. The replanned program has been revised since then in response to Congressional direction to add risk reduction tasks and to include additional testing in the Acquisition Phase. The new estimate to complete the AAS design competition phase contracts is approximately $500 million.

Both a subjective schedule assessment by your program office personnel and a detailed computerized schedule risk analysis by Martin Marietta show that the award is unlikely to be made before October 1988.

Question: What is a realistic award date according to your current analysis?

Answer: We expect the AAS contract will be awarded between June and August 1988, with August being the most realistic estimate.

Your February 19, 1987, "smart sheet" on the AAS program indicates the total costs may exceed $5 billion -- a significant cost increase.

Question: What are your current AAS cost and schedule estimates?

Answer: The current AAS $5 billion cost estimate breaksdown as follows:

Design Competition Phase	
Prime Contractors	$500M
Other/Support	216M
Subtotal	$716M
Acquisition Phase	
Prime Contractor	$3792M
Other/Support	510M
Subtotal	$4302M
Total	$5018M

The current schedule is:

Acquisition Phase RFP	August 1987
Contract Award	August 1988
Initial Sector Suite System Operational Readiness Demonstration (1st to 20th site)	September 1993 - July 1995
Terminal Advanced Automation System Operational Readiness Demonstration (1st to 20th site)	May 1995 - February 1997
Area Control Computer Complex Operational Readiness Demonstration (1st to last)	June 1996 to May 1998

SYSTEMS ENGINEERING AND INTEGRATION CONTRACT

In the past there has been some confusion about the "Mission Responsibility" you and your systems engineering and integration contractor (SEIC) appear to share regarding the development of the NAS Plan.

Question. Would you explain the SEIC's accountability to you for this shared "Mission Responsibility" and indicate how this responsibility differs (if it does) from that of a prime contractor?

Answer. The "mission responsibility" of a prime (project) contractor is to deliver a single product on schedule and within cost. The SEI contractor is responsible to the FAA for the overall NAS system design, test planning, implementation, and support. Its role in individual projects is one of three levels of support, i.e., project monitoring, technical support, or technical direction. Basically the SEI Contractor is to assist the FAA to ensure that the overall objectives of the NAS Plan are met including technical scope, schedules, and costs.

Question. Does the SEIC have any contracted responsibilities to your Air Traffic Service?

Answer. The SEI contractor does not have any contracted effort with Air Traffic (AT).

Question. If not how does the SEIC determine the Air Traffic Service's operating requirements in the NAS Plan?

Answer. The SEI contractor does not determine Air Traffic's (AT) operational requirements. Operational requirements are identified by the FAA and supported by an independent contractor (Mitre Corporation). This eliminates a potential conflict of interest on the part of the SEI contractor whereby it would be designing a system for which it had established the requirements. The SEI contractor is a member of the NAS Configuration Control Board which approves changes to the National Airspace Systems Requirements Statement and the NAS system specification resulting from operating requirement changes submitted by AT to the Systems Engineering Service for incorporation in the NAS Plan.

Question. To what extent has your Air Traffic Service organization refused to accept the SEIC's NAS Plan operational benefits?

Answer. The Air Traffic Service is concerned that NAS Plan benefit claims for productivity gains, based upon improved capabilities of the Advanced Automation System, are overstated. The FAA is currently conducting a Congressionally directed independent AAS cost benefit analysis to provide a validated range of benefits which are achievable. However, any change in dates of product deliverables could defer some benefits and inadequate allowances for parallel operations during systems implementation could also impact savings.

Question. If they have, to what extent is this based on disagreements over operating requirements?

Answer. The Air Traffic Service concern is not based on disagreement on operational requirements of the NAS Plan.

Question. How would you grade the SEIC's overall system management and engineering integration efforts, the SEIC's design and integration role in the automation program, and the SEIC's project level assistance and technical support?

Answer. The SEI contractor's overall systems management and engineering integration efforts have been consistently better than average, and the same is true for project level assistance and technical support. The SEI contractor contributes across the entire spectrum of the Advanced Automation Program. This includes management, system engineering, cost analysis, schedule analysis, performance monitoring, implementation planning, test planning and independent verification, and validation. The SEI contractor grade on its overall performance exceeds the general level of achievement expected of a qualified contractor in this field.

Question. Which of the tasks has the SEIC performed best and which are performed the worst?

Answer. The best performance has been in NAS planning in the annual updating of the NAS Plan. The worst performance has been in the area of national transition planning.

Question. What bonus have been paid to SEIC over the years and in view of the number of projects with major schedule slips, what is the basis for these bonuses?

Answer. The SEI contractor has received no bonuses for efforts on this contract. This is a cost plus award fee contract, and there is no provision for any other type of bonus or reward.

Question. What contributions has the SEIC made to the AAS program and how do you rate the SEIC's performance regarding this program?

Answer. The SEI contractor contributes across the entire spectrum of the Advanced Automation System program. This includes management, system engineering, cost analysis, schedule analysis, performance monitoring, implementation planning, test planning and independent verification, and validation. The SEI contractor grade on its overall performance exceeds the general level of achievement expected of a qualified contractor in this field.

TECHNICAL SUPPORT SERVICES CONTRACT

The cost of your Systems Engineering and Integration contract will be about $900 million over the life of the contract if the two option clauses totaling five additional years are exercised. You stated that this contract includes the architectural and engineering design related to the installation and integration of the individual NAS plan projects. You also stated that you expect to accomplish this work without expanding the anticipated cost of the Systems Engineering and Integration contract.

Question. Is the anticipated cost you are referring to about $900 million?

Answer. Yes the anticipated cost of the Systems Engineering and Integration contract is about $900 million.

The Committee understands that the balance of the NAS equipment implementation efforts will require substantial supplementing of your regional staff. To accomplish this, you apparently intend to award a Technical Support Services Contract (TSSC) which is estimated to cost $350 to $400 million.

Question. Why do you intend to perform this work by contract rather than with in-house personnel?

Answer. Deployment of NAS Plan equipment will create peak periods when additional implementation (including installation) staffs will be required. It would not be prudent to significantly increase FAA's permanent work force to satisfy these peak needs. Private industry has the capability to effectively supplement our implementation and installation work force.

Question. As the air traffic system continues to expand aren't you going to have a continuing requirement for installation personnel?

Answer. FAA will have a continuing need for installation personnel. The NAS plan takes into account forecasts of increasing air traffic. Our needs for installation personnel are based upon projects included in that plan.

Question. Why do you feel you need to have a national contract for this work?

Answer. We believe that a single TSSC will clearly provide savings through economies of scale, maximize learning curve effect through lessons learned and provide for greater centralized mangement and accountability. The implementation of the NAS Plan projects is a major engineering undertaking with most of the major projects corssing regional boundaries. The modification, relocation or replacement of existing systems by one contractor having responsibility across regional boundaries will reduce the risk of unnecessary outages or errors during this complex operation.

Question. Will the TSSC include any site design work?

Answer. The TSSC will not be involved in major site design work. The SEI contractor is responsible for specific facility designs while TSSC will accomplish site preparation, installation, and hands-on test. Some minor site adaption of existing design work may be included in TSSC site preparation tasks when it is cost effective and reduces the need for complex coordination between the two contractors.

Question. If so, how will this affect your SEIC?

Answer. The minor adaption of existing site design work will not affect the SEI contract. The SEI contract does not include minor site adapted design work which is typically accomplished by regional FAA personnel.

Question. How do you intend to control the separation of work between TSSC and SEIC?

Answer. The FAA regional offices have line authority to implement the NAS projects under overall direction provided by the FAA Headquarters program management organization. TSSC and SEI contractors support the regional offices in separate and distinct areas. A single point of day-to-day control and managment exists in each regional airway facilities division office.

FLIGHT SERVICE AUTOMATION

You are requesting $67.5 million to continue your flight service station automation and consolidation program. According to the GAO the total cost of this program is about $480 million.

Question: Is that correct?

Answer: Yes, this is correct.

Question: How much have you spent to date on this program?

Answer: We have committed $340 million to date.

Question: What is the current status of the program?

Answer: All of the Model 1 systems have been delivered (13 Flight Data Processing Systems (FSDPS) and 37 Automated Flight Service Stations (AFSS)). Authorizations to proceed with phase 2 (M1FC): which will complete the system (61 AFSS's and 23 FSDPS's) was received from Congress/DOT in April 87. We expect to complete the Contract Modification and to turn on the contractor not later than 8/15/87.

Question. You are requesting $2.7 million for automated weather observing systems (AWOS) to be installed at locations where existing flight service stations are scheduled to be closed or relocated. Current law requires that a flight service station (FSS) may be closed only if the weather information for the area served by the FSS continue to be as good or better than before the closure. This weather information may be provided either by mechanical device or by a contract weather observer. Our understanding is that since the current AWOS does not reliably provide two weather observations -- cloud ceiling and visibility -- you have been planning to provide weather observation through contract weather observers to comply with the legislative requirement.

In view of this, what is the basis for your $2.7 million request?

Answer. AWOS sensor development is progressing at a steady rate. Two companies have produced AWOS II's which were certified by the FAA. An AWOS II includes all required sensors except ceiling -- a visibility sensor has been developed; however, due to a small miscalculation in logic, it was not certified. The problem has been well documented and is correctable within a 3-6 month effort.

During the period of time required to certify the visibility sensor it is anticipated that a ceiling sensor will be available for certification.

Once both the visibility and the ceiling sensors have been evaluated and certified (early 1988), the resulting AWOS III will produce a weather observation that satisfies the requirements of Public Law 97-248, Section 528(c).

Today, some ten commercial companies are fabricating automatic weather reporting devices and are expected to become involved in the aviation program in the near future. The requested $2.7M funding will enable FAA to take full advantage of the AWOS III once it is certified.

You now intend to replace your Model 2 program with a so-called Model 1 Full Capacity program.

Question: In developing this option, what alternatives did you consider and what was the basis for selecting the Model 1 Full Capacity option?

Answer: We considered several Model 2 alternatives as follows:

1. Model 1 Full Capacity (M1FC) (4 Computer Processors Units), configured as follows:
   a. 23 FSDPS's, 61 AFSS's, and 2 AWP's
   b. 23 FSDPS's, 61 AFSS's (no AWP's)
   c. 20 FSDPS's, 56 AFSS's, and 2 AWP's (no "Off Shores")
   d. 20 FSDPS's, 56 AFSS's (no AWP's or "Off Shores")

2. Extending present Model 1 (M1) configuration (3 Computer Processor Units) as follows:

   a. 23 FSDPS's, 61 AFSS's (no AWP's)
   b. 20 FSDPS's, 56 AFSS's (no AWP's or "Off Shores")

The basis for selecting the M1FC, with 23 FSDPS's, 61 AFSS's and 2 AWP's was the option that:
   a. Fulfilled our full consolidation requirements
   b. Was the most cost effective, considering that 90 percent of the hardware was already purchased.
   c. Was the best option that would meet the minimum Air Traffic requirements.
   d. Was the best option that could handle the fail safe/soft requirements when full consolidation occurs (a significant safety provision)
   e. Was the most viable option to allow interfaces with other NAS programs as they evolve.

Question: Why was the option developed by Mitre rejected?

Answer: The Mitre option was one of several studies requested to assess the viability and/or impact of pursuing various alternative. This was not a recommended option by Mitre, or other parties, evaluating the various options. It was not rejected, rather considered as part of the overall evaluation of all available options to select the alternative best meeting all requirements.

AIRPORT CAPACITY

Question. Your proposed legislation includes a large discretionary amount for capacity improvements. What criteria have you established for allocating these funds?

Answer. Our proposed legislation requires a performance-based methodology for determining project priorities that includes the project's impact on overall national air transportation system capacity, project benefit and cost and the financial commitment of the airport sponsor in enhancing or preserving airport capacity. In establishing this performance-based methodology, FAA will look at a number of factors, including: airports and geographical areas causing significant system wide delay results of airport capacity enhancement task force studies; recommendations contained in FAA's Airport Capacity Enhancement Plan; aviation growth factors; airport and airspace benefits and project costs; and factors which identify the sponsor's past and present commitment to preserving airport capacity.

Question. Do you intend to use estimated increased enplanements as part of your criteria?

Answer. Forecast aviation growth, including forecast enplanements, will be one of the aviation growth factors considered.

Question. If so, how are you going to determine the validity of these estimates?

Answer. There will be a number of sources available for forecast aviation growth indicators, such as enplanements. These include recent Master Plan studies, Capacity/Delay Task Force studies, or published FAA national forecasts. FAA staff will review forecasts used for reasonableness and consistency with known or projected growth factors at the airport.

Question. You are proposing to eliminate the separate 10 percent set aside for reliever airports. In some areas, these airports are essential to reducing over capacity at the major metropolitan airports. Why did you eliminate their 10 percent allocation?

Answer. Existing AIP discretionary set-asides were eliminated to provide increased flexibility and to allow the discretionary fund to target funds at safety/security and capacity enhancement projects at large commerical service and reliever airports. Due to the restructuring of the program, reliever airports can be funded from the large discretionary fund as well as from the general State apportionment. Since the emphasis on capacity will allow priority reliever projects to compete effectively from the discretionary fund, and since reliever airports can be supplemented with funds from the State apportionment category, relievers could compete effectively without a specific set-aside.

Question. One of the major features of your legislation is the option permitting airport operators with formula entitlement rights to forego that entitlement right and impose their own passenger facility charge. What is the reason for this proposal?

Answer. The voluntary defederalization option was proposed to encourage those airports that can self finance their own improvements to do so, reducing the involvement of the Federal government in their activities.

Question. How will it work?

Answer. Under the Administration's proposal, any airport could opt to forego eligibility under the airport grant program. Those airports that have removed themselves from eligibility would be allowed to collect a passenger facility charge (PFC). Revenues from a PFC could only be used on airport related expenses. Airports selecting defederalization would still be subject to other existing Federal safety and security requirements, thereby ensuring that safety and security would not be compromised.

Question. What are the nature and extent of the reactions to it?

Answer. At present, it does not appear there is organized support for defederalization. However, we believe some larger airport sponsors may be interested in the concept with the PFC capability, especially if a large grant program level is not authorized.

DRUG AND ALCOHOL TESTING

Question. To what extent is alcohol or drug abuse by General Aviation pilots a factor in this higher accident rate and how will your drug-testing proposal affect this group?

Answer. Statistics indicate that there is drug and alcohol abuse among General Aviation pilots as evidenced by the attached tables, which are based on fatal aircraft accidents. There is no similar data for commercial airline pilots with the exception of one cargo aircraft that crashed in 1983 in which both the pilot and copilot had been exposed to marijuana.

At present, we are not contemplating testing private pilots, since they are engaged in private activity that does not involve a "public trust," such as in the case of commercial air carrier activities.

Drugs Found In Deceased General Aviation Pilots
By Classification 1976-1986[1]

Year	Deceased Pilots	Legal Therapeutic Drugs[2]	Legal Drugs of Abuse[3]	Illegal Drugs of Abuse[4]
1976	377	1	0	1
1977	394	2	1	1
1978	410	2	2	0
1979	388	4	3	2
1980	384	10	0	3
1981	431	5	2	3
1982	389	2	2	3
1983	412	6	0	3
1984	399	2	1	2
1985	412	9	3	4
1986	380	7	7	6
TOTAL	4,376	50	21	28

NOTES:

[1] The presence of drugs in an individual's system may, or may not, have been a factor in a fatal accident. For instance, an individual might have been taking a legal therapeutic drug, but could have been abusing it by taking it at more frequent intervals than prescribed. For this reason, the FAA reports all drugs found in fatalities.

[2] This would include over-the-counter drugs, such as aspirin and diet pills, as well as those drugs prescribed by physicians.

[3] A legal drug of abuse is a drug that may be prescribed by a physician or purchased over-the-counter, but which has properties that may result in psychological or physiological dependencies or addiction.

[4] Illegal drugs of abuse would include drugs such as marihuana and cocaine.

TABLE 2

Alcohol Found in Deceased General Aviation Pilots
Calendar Years 1968-1985

Year	Cases	Alcohol Above .04%	Percentage
1968-70	458	50	10.9
1971	214	27	12.6
1972	264	19	7.1
1973	292	18	6.1
1974	319	36	11.2
1975	310	20	6.4
1976	377	33	8.7
1977	394	34	8.6
1978	410	34	8.3
1979	388	22	5.7
1980	384	25	6.5
1981	431	28	6.5
1982	389	27	6.9
1983	412	29	7.0
1984	399	19	4.8
1985	412	20	4.9
1986	380	16	4.2
TOTALS	6,233	457	7.3

NOTE:
Alcohol from fermentation has been ruled out in the above cases.

Question. Have you determined what, if anything, was wrong with the testing performed on the Conrail crew by your laboratory?

Answer. As a result of concern for possible procedural irregularities in the analysis of blood and urine specimens at the Forensic Toxicology Unit of the Civil Aeromedical Institute (CAMI), the Office of the Inspector General (OIG) has initiated an investigation of that facility.

As an adjunct to the OIG investigation, the FAA has requested that the Armed Forces Institute of Pathology (AFIP) provide professional and technical assistance to confirm any deficiencies in that unit and to identify any required technical solutions.

While the validity of the reported findings in the Conrail crew specimens are in question, it is premature to conclude that the test results were erroneous.

Questions regarding possible procedure irregularities and the validity of test results cannot be answered until the OIG and AFIP have concluded their investigations and advised us of their findings.

We anticipate that the OIG and the AFIP will soon complete the investigations, and issue their reports.

Question. How will you ensure the accuracy of the drug tests performed on your controllers and other safety-related personnel?

Answer. FAA's contract laboratory, CompuChem, is DOD-certified which is one of the most stringent programs for monitoring day-to-day operations of laboratories.

A two-step drug testing process is used by the laboratory. If the screening stage shows positive evidence of drugs, the confirmation test is done to validate the presence of drugs. Gas chromatography/mass spectrometry (GC/MS) technology is totally accurate and is the only authorized confirmation method.

The laboratory's chain-of-custody procedures are among the best in laboratory science. The procedures are fully automated and verified at every stage of documentation that requires a signature by each person who touches a sample.

FAA is required to submit 1,000 blind proficiency test specimens initially to the laboratory and 250 per quarter thereafter. These test specimens are required in compliance with quality control procedures set forth in HHS Scientific and Technical Guidelines for Drug Testing Programs.

FAA's drug testing program guarantees the individual employee the right to one external retest, and the laboratory is committed to perform an internal retest whenever it is requested by an authorized FAA representative.

OTHER GENERAL QUESTIONS

Question. The fiscal year 1987 continuing resolution required the initiation of a rulemaking action regarding the additional implementation of automatic altitude reporting equipment. What is the status of this rulemaking?

Answer. The notice of proposed rulemaking requiring automatic altitude reporting equipment for all aircraft operating within 30 nautical miles of the primary airport is now being reviewed by the office of the Secretary of Transportation.

Question. The air traffic controllers will conduct a vote between May 6 and June 10 on the issue of establishing a new controllers union. Do you believe a new union could adversely affect air safety in anyway?

Answer. A union's role would be to represent the people in the bargaining unit on issues relating to conditions of employment. As a result, we do not anticipate an adverse impact on aviation safety if there is a new union.

Question. What impact do you believe the establishment of a controllers union will have on FAA management's attitudes?

Answer. We believe that the establishment of a controllers union will not hamper our efforts to continue to improve our employee/management relations already in progress. Since 1981 the agency has put significant efforts to improve the management of its facilities by establishing employee participation groups and human relations committees and also gauging its management attitudes through a yearly employees survey.

MICROWAVE LANDING SYSTEM

There appear to be alternatives to deal with limitations inherent to ILS, such as increasing the number of channels to reduce frequency saturation and elevating the ILS equipment to minimize geophysical effects on the signal.

Question. In light of significant improvements in ILS, why do you still consider it necessary to purchase 1,250 MLS's to replace existing ILS's that appear to be working just fine?

Answer. Increasing the number of channels within the existing ILS frequency band requires new ILS avionics and often necessitates channel changes for adjacent stations. There is no assurance that all locations can be assigned an interference free channel. The ILS geophysical limitations cannot be overcome at all locations and the achieved signal quality at many locations does not meet the desired operational requirements. Current ILS equipped runways will need equipment replacements due to the age of the ILS equipment. These ILS equipments were originally designed to last 15 years. The age of the ILS equipment will be considered in the MLS replacement schedules. The MLS Benefit/Cost study addresses the issue of complete replacement of ILS with MLS as stated in the MLS transition plan. The results confirm that the MLS program provides a positive benefit/cost ratio.

Question: What plan does FAA have for satisfying the 83 precision landing system needs that were identified in 1982 and which have not been satisfied or are not scheduled to be satisfied by the first MLS procurement?

Answer: Those locations which are qualified for MLS establishment, but are not included in the first MLS procurement, will be considered for inclusion in future procurements. As a result of the Administrator's approval of the FAA Microwave Landing System Transition Policy on May 16, those locations would also be considered for an instrument landing system (ILS) if they meet the qualifying criteria.

Question. With planned development of dual ILS/MLS avionics by DOD and the potential to have both ILS and MLS avionics in commerical aircraft, isn't it conceivable to use ILS and MLS on an interoperable basis?

Answer. There are currently no existing designs or known planned dual ILS/MLS avionics for commerical or private aircraft. The cost of dual ILS/MLS avionics must be born by the aircraft owner and will be greater than the cost for only ILS or MLS avionics. In addition the cost of operating and maintaining both ILS and MLS ground systems is higher than the cost for only one type of landing system. In summary, an interoperable strategy is not cost effective compared to an MLS only or ILS only implementation.

Question. Wouldn't it seem logical for commercial air carriers and other potential users to wait until dual ILS/MLS aircraft receivers are developed rather than purchasing MLS-only receivers now or in the near future?

Answer. There are currently no planned dual ILS/MLS avionics for commerical or private aircraft. Whenever a runway is equipped with MLS it may be beneficial for an air carrier or an aircraft owner to equip with MLS avionics. The decision of when to equip will logically be made on a case by case basis by the operator, and will be dependent on individual needs and the intended uses of the available MLS service.

FAA has not built and tested a limited production run of MLSs in a variety of operational settings.

Question. Does FAA now plan to demonstrate MLS straight in and curved approaches in a wide-body aircraft at hub airports using approved air traffic control procedures?

Answer. During the MLS deployment and operational evaluation programs numerous flight demonstrations of MLS straight-in and curved approaches were conducted in a range of aircraft:

- Air carrier type aircraft (i.e., 727, 737, and CV-880) and a military C-141. (representative of the flight characteristics of wide-body aircraft) were flown by airline pilots.

- Demonstrations were conducted at several hub airports, including JFK, Philadelphia International, and Washington National, as well as airports in a number of foreign countries.

MLS demonstrations have been compatible with approved air traffic procedures. In addition, FAA has developed an air traffic analysis guide to facilitate exploiting the MLS capabilities from an ATC standpoint.

Users are not ordering new aircraft with provisions for MLS.

Question. When do you expect MLS, and especially the curved approach, to be widely used considering the lack of user equipage for MLS?

Answer. MLS will be widely used in "ILS like" operations 1 to 3 years after ground equipments are installed and commissioned. Enhanced procedures such as computed centerline approaches, departure guidance, and curved and segmented approaches, will be implemented in 2 to 5 years from 1987. We expect enhanced procedures to be widely used in 5 to 10 years.

ACCIDENT, FATALITIES, AND RATES

Question. Please update the tables found on pages 737-745 of last year's hearings.

Answer. See the attached tables.

TABLE 1
ACCIDENTS, FATALITIES, AND RATES
AIR CARRIERS AND GENERAL AVIATION
1986 (PRELIMINARY DATA)

	Accidents					Accident Rates **			
						Per 100,000 Aircraft Hours		Per 100,000 Departures	
AIR CARRIERS	Total	Fatal	Fatalities	Aircraft Hours Flown	Departures	Total	Fatal	Total	Fatal
Air Carriers Operating Under 14 CFR 121									
Scheduled	22	1	3	8,941,000	6,435,000	0.246	0.011	0.342	0.016
Nonscheduled	2	0	0	323,000	159,000	0.619	0.	1.258	0.
Air Carriers Operating Under 14 CFR 135									
Scheduled **	14	2	4	1,707,000	2,428,000	0.82	0.12	0.58	0.08
Nonscheduled	118	31	64	2,763,000	*	4.27	1.12	--	--
GENERAL AVIATION +	2568	466	958	30,361,000	*	8.46	1.53	--	--

+ Includes accidents involving aircraft flown under rules other than 14 CFR 121 and 14 CFR 135.

* Data not available.

** Rates are based on all accidents, including those involving operators not reporting traffic data to the Research and Special Programs Administration (RSPA).

Exposure data estimate source: FAA.

TABLE 2
ACCIDENTS, FATALITIES, AND RATES
U.S. AIR CARRIERS OPERATING UNDER 14 CFR 121
ALL SCHEDULED SERVICE
(AIRLINES *)
1976 - 1986

	Accidents		Fatalities					Accident Rates					
								Per Million Aircraft Miles		Per 100,000 Aircraft Hours		Per 100,000 Departures	
Year	Total	Fatal	Total	Aboard	Aircraft Miles Flown#	Aircraft Hours Flown#	Departures#	Total	Fatal	Total	Fatal	Total	Fatal
1976	21	2	38	38	2,319,997,000	5,587,776	4,832,664	0.009	0.001	0.376	0.036	0.435	0.041
1977	19	3	78	69	2,418,645,000	5,798,873	4,936,519	0.008	0.001	0.328	0.052	0.385	0.061
1978	20	5	160	150	2,520,165,000	6,031,743	5,015,939	0.008	0.002	0.332	0.083	0.399	0.100
1979	23	4	351	348	2,791,120,000	6,713,094	5,399,652	0.008	0.001	0.343	0.060	0.426	0.074
1980	15	0	0	0	2,816,303,000	6,797,578	5,352,927	0.005	0.	0.221	0.	0.280	0.
1981	25	4	4	2	2,703,219,000	6,571,288	5,211,867	0.009	0.001	0.380	0.061	0.480	0.077
1982	15	3	233	221	2,698,928,000	6,440,163	4,963,794	0.006	0.001	0.233	0.047	0.302	0.060
1983	22	4	15	14	2,808,566,000	6,649,009	5,033,906	0.008	0.001	0.331	0.060	0.437	0.079
1984	12	1	4	4	3,113,567,000	7,438,497	5,448,150	0.004	0.000	0.161	0.013	0.220	0.018
1985	18	4	197	196	3,331,876,000	7,934,135	5,724,420	0.005	0.001	0.227	0.050	0.314	0.070
1986P	22	1	3	3	3,723,000,000	8,941,000	6,435,000	0.006	0.000	0.246	0.011	0.342	0.016

P Preliminary data.

* Includes accidents involving deregulated all cargo air carriers and commerical operators of large aircraft when those accidents occurred during 14 CFR 121 operations.

# Source of estimate: FAA.

TABLE 3
ACCIDENTS, FATALITIES, AND RATES
U.S. AIR CARRIERS OPERATING UNDER 14 CFR 121
ALL NONSCHEDULED SERVICE
(AIRLINES *)
1976 - 1986

	Accidents		Fatalities					Accident Rates					
								Per Million Aircraft Miles		Per 100,000 Aircraft Hours		Per 100,000 Departures	
Year	Total	Fatal	Total	Aboard	Aircraft Miles Flown#	Aircraft Hours Flown#	Departures#	Total	Fatal	Total	Fatal	Total	Fatal
1976	2	0	0	0	99,294,000	218,953	88,502	0.020	0.	0.913	0.	2.260	0.
1977	5	2	577	329	106,383,000	240,834	108,340	0.047	0.019	2.076	0.830	4.615	1.846
1978	2	0	0	0	88,197,000	202,883	96,351	0.023	0.	0.986	0.	2.076	0.
1979	6	1	3	3	68,018,000	165,817	86,550	0.088	0.015	3.618	0.603	6.932	1.155
1980	4	1	1	0	107,931,000	269,890	126,425	0.037	0.009	1.482	0.371	3.164	0.791
1981	1	0	0	0	95,356,000	238,967	117,182	0.010	0.	0.418	0.	0.853	0.
1982	4	1	1	1	105,547,000	262,088	130,414	0.038	0.009	1.526	0.382	3.067	0.767
1983	2	0	0	0	114,017,000	281,555	133,161	0.018	0.	0.710	0.	1.502	0.
1984	4	0	0	0	130,629,000	325,060	151,391	0.031	0.	1.231	0.	2.642	0.
1985	5	3	329	329	138,109,000	344,247	163,280	0.036	0.022	1.452	0.871	3.062	1.837
1986P	2	0	0	0	130,000,000	323,000	159,000	0.015	0.	0.619	0.	1.258	0.

P Preliminary data.

* Includes accidents involving deregulated all cargo air carriers and commerical operators of large aircraft when those accidents occurred during 14 CFR 121 operations.

# Source of estimate: FAA.

TABLE 4
ACCIDENTS, FATALITIES, AND RATES
U.S. AIR CARRIERS OPERATING UNDER 14 CFR 135
ALL SCHEDULED SERVICE
(COMMUTER AIR CARRIERS *)
1976 - 1986

	Accidents		Fatalities					Accident Rates +					
								Per Million Aircraft Miles		Per 100,000 Aircraft Hours		Per 100,000 Departures	
Year	Total	Fatal	Total	Aboard	Aircraft Miles Flown#	Aircraft Hours Flown#	Departures#	Total	Fatal	Total	Fatal	Total	Fatal
1976	35	9	27	23	171,471,894	965,296	1,532,425	0.20	0.05	3.63	0.93	2.28	0.59
1977	44	9	32	32	201,282,211	1,150,250	1,740,502	0.22	0.04	3.83	0.78	2.53	0.52
1978	61	14	48	48	226,186,596	1,302,136	1,995,728	0.27	0.06	4.68	1.08	3.06	0.70
1979	52	15	66	66	192,492,929	1,169,921	1,883,705	0.27	0.08	4.44	1.28	2.76	0.80
1980	38	8	37	37	192,200,134	1,175,588	1,776,999	0.20	0.04	3.23	0.68	2.14	0.45
1981	31	9	34	32	193,000,863	1,240,764	1,835,144	0.16	0.05	2.50	0.73	1.69	0.49
1982	26	5	14	14	222,355,330	1,299,748	2,026,691	0.12	0.02	2.00	0.38	1.28	0.25
1983	18	2	11	10	253,572,010	1,510,908	2,328,430	0.07	0.01	1.19	0.13	0.77	0.09
1984	22	7	48	46	291,459,640	1,745,762	2,676,590	0.08	0.02	1.26	0.40	0.82	0.26
1985	22	7	37	36	300,816,953	1,737,106	2,561,463	0.07	0.02	1.27	0.40	0.86	0.27
1986P	14	2	4	4	302,191,000	1,707,000	2,428,000	0.05	0.01	0.82	0.12	0.58	0.08

P Preliminary data.

Source of estimate: FAA.

+ Rates are based on all accidents including some involving operators not reporting traffic data to RSPA.

* Includes accidents involving all-cargo air carriers when those accidents occurred during scheduled 14 CFR 135 operations. All-cargo air carriers no longer meet the RSPA definition for "Commuters". May also include accidents involving carriers whose FAA operating specifications permit scheduled revenue operations under 14 CFR 135, but who have not received a RSPA fitness determination.

TABLE 5
ACCIDENTS, FATALITIES, AND RATES
U.S. AIR CARRIERS OPERATING UNDER 14 CFR 135
NONSCHEDULED OPERATIONS
(ON-DEMAND AIR TAXIS)
1976 - 1986

	Accidents		Fatalities			Accident Rates Per 100,000 Aircraft Hours	
Year	Total	Fatal	Total	Aboard	Aircraft Hours Flown#	Total	Fatal
1976	137	31	100	97	2,703,203	5.07	1.15
1977	158	31	118	115	3,304,220	4.78	0.94
1978	198	54	155	152	3,545,753	5.58	1.52
1979	160	30	77	73	3,684,321	4.34	0.81
1980	171	46	105	101	3,617,724	4.73	1.27
1981	157	40	94	92	2,895,827	5.42	1.38
1982	132	31	72	72	3,256,763	4.05	0.95
1983	140	27	62	57	2,574,883	5.44	1.05
1984	146	23	52	52	3,079,007	4.74	0.75
1985P	152	35	76		2,782,696	5.46	1.26
1986P	118	31	64		2,763,000	4.27	1.12

P Preliminary data.

Source of estimate: FAA.

TABLE 6
ACCIDENTS, FATALITIES, AND RATES
U.S. GENERAL AVIATION *
1976 - 1986

	Accidents		Fatalities			Accident Rates@ Per 100,000 Aircraft Hours	
Year	Total	Fatal	Total	Aboard	Aircraft Hours Flown#	Total	Fatal
1976	4018	658	1216	1203	30,476,000	13.17	2.16
1977	4079	661	1276	1265	31,578,000	12.91	2.09
1978	4216	719	1556	1398	34,887,000	12.08	2.06
1979	3818	631	1221	1203	38,641,000	9.88	1.63
1980	3590	618	1239	1230	36,402,000	9.86	1.69
1981	3500	654	1282	1261	36,803,000	9.51	1.78
1982	3233	591	1187	1171	32,095,000	10.06	1.84
1983	3075	555	1064	1057	31,048,000	9.90	1.79
1984	3010	543	1039	1018	31,510,000	9.54	1.72
1985P	2745	500	957		30,589,905	8.97	1.63
1986P	2568	466	958		30,361,000	8.46	1.53

P Preliminary data.

Source of estimate: FAA.

* All operations other than those conducted under 14 CFR 121 or 14 CFR 135.

@ Suicide and sabotage accidents excluded from rates as follows:
Total - 1976 (4), 1977 (1), 1978 (2), 1980 (1), 1982 (3), 1983 (1), 1984 (3)
Fatal - 1976 (1), 1977 (1), 1978 (2), 1980 (1), 1984 (2)

TABLE 7
FATAL ACCIDENTS AND FATALITIES
U.S. AIR CARRIERS OPERATING UNDER 14 CFR 121
ALL SCHEDULED SERVICE
(AIRLINES)
1986 (PRELIMINARY DATA)

Date	Location	Operator	Service	Aircraft	Fatalities				Total Aboard	Reported Type of Accident
					Pagr	Crew	Other	Total		
10/4	Kelly Air Force Base, TX	Southern Air Transport	Cargo	L-382-G	0	3	0	3	3	Crashed on takeoff

TABLE 8
FATAL ACCIDENTS AND FATALITIES
U.S. AIR CARRIERS OPERATING UNDER 14 CFR 135
ALL SCHEDULED SERVICE
(COMMUTER AIR CARRIERS)
1986 (PRELIMINARY DATA)

Date	Location	Operator	Service	Aircraft	Fatalities				Total Aboard	Reported Type of Accident
					Pagr	Crew	Other	Total		
3/13	Alpena, MI	Simmons Airlines	Pasg	Embraer EMB-110P1	2	1	0	3	9	Crashed while approaching airport during instrument flying conditions
10/28	St. Croix, VI	Virgin Island Seaplane Shuttle	Pasg	Grumman G-73	1	0	0	1	15	Crashed into sea shortly after takeoff

RESEARCH, ENGINEERING & DEVELOPMENT

Question. What is the status of your conflict resolution advisory project which you indicated last year had been suspended pending a revalidation of your requirements?

Answer. Evaluation of the prototype conflict resolution advisory software has been completed. The operational software will be developed and implemented as part of NAS en route software support contract (award June 1988). The first operational use will be June 1990. No further R,E&D dollars or work are required.

Question. Does your fiscal year 1988 request include funding for any new projects or programs?

Following are the two new projects in the Research, Engineering, and Development FY 1988 request.

Rotorcraft Simulator Visual Scene
Meaningful helicopter training simulation demands precise visual cues over a wide range of speed and altitudes. In FY 1988, a plan will be developed to establish the visual system performance requirements for helicopter simulator and training and an analysis of the resolution, vertical field of view, and scene detail necessary will be intitiated.

Rotorcraft Simulator Motion System
The motion system of a helicopter simulator must reflect accurately the handling qualities of the vehicle. In FY 1988, a plan will be developed to establish the motion system requirements for helicopter simulators. The plan will include an analysis of the snychronization requirements between motion and visual systems. In FY 1988 and FY 1990, simulator tests will be conducted and reports published that will define the criteria for both the visual and motion system performance.

RESEARCH AND DEVELOPMENT CONTRACTS

Question. Would you provide for the record a list of those projects conducted by MITRE, including the costs with each of fiscal year 1987 and 1988?

Answer. Schedule I Program Engineering & Maintenance: Engineering support primarily for selected National Airspace System plan projects

FY 1987	FY 1988
$ 8,225,739	$ 8,358,847

Schedule II Systems Engineering: Engineering support in the areas of Automated En Route ATC, National Airspace System Modernization, and Airport Capacity improvements

FY 1987	FY 1988
17,673,230	12,045,815

Schedule III Advanced Automation: Engineering support to the Advanced Automation Program in the areas of System Engineering, System Development, and Program Control Support

FY 1987	FY 1988
4,696,520	10,832,859

Schedule IV Environment: Support the Environmental Program in the areas of Improved Oceanic Routes for Fuel Conservation and Controller Efficiency, Evaluating General Aviation Fuel-Burn Equations, Developing a Helicopter Fuel-Burn Equation, and in Fuel Efficient Flight Techniques and Applications

FY 1987	FY 1988
403,536	417,659

Schedule V Air Traffic: Support to Air Traffic in the Areas of System Recovery and Revitalization of Human Resources and Performance, and in Traffic Plan Management

	FY 1987	FY 1988
	1,468,207	1,519,595
TOTAL	$32,467,232	$33,174,775

Question. Last year it was indicated that for fiscal years 1984 through 1987 nearly $130 million would be provided to MITRE under a sole source contract. Why do you need such a large sole source contract--why can't TSC do some of this work?

Answer. The FAA has made the determination to capitalize on the extensive background of MITRE in the ATC area. MITRE is supporting FAA in major programs including AERA and data link.

TSC provides major support to FAA in supporting FAA program in the area of information systems planning and development, systems maintenance activities, leased communications, navigation policy, and traffic management system improvement. No duplication exists between tasks assigned to MITRE an TSC.

Question. What other sole source research and development contracts do you have that are in excess of $3 million?

Answer. There are no other sole source research and development contracts in excess of $3 million.

UNOBLIGATED BALANCE

You indicate that you had an unobligated balance of $21,088,000 as of September 30, 1986.

Question. What was the reason for this large carryover, particularly since you were not projecting any such carryover last year.

Answer. The majority of the carryover was the result of a 1-month delay in awarding the VSCS contract.

AIR TRAFFIC CONTROL

Your first activity is air traffic control and the first subactivity under this heading is system research for which you are requesting $25,250,000. On page 18, many of the functions listed (maintenance of the requirements baseline, functional interfaces between subsystems, information flows and connectivity, etc.) appear to similar to the activities of your systems engineering and integration contractor.

Question. What is the relationship between this work and that of the SEI?

Answer. This subactivity actually provides for the front end engineering associated with the integration of new or modified requirements into the NAS system design. As such, it not only includes the initial analysis and validation of a requirement, but also the necessary analysis of alternative technological methods of meeting that requirement and the analysis of impacts to the NAS system. This total activity includes both the requirements analysis supported by the MITRE Corporation and the associated design work by the SEIC for those requirements. Maintenance of the requirements baseline, development of operational concepts and proposals for allocation of requirements to the subsystems of the NAS are tasks assigned to MITRE. Definition of the allocation of performance requirements to the subsystems of the NAS Information flows and connectivity, development of system specifications, and incorporation of newly approved programs into the system design are SEIC tasks.

On page 20, you are requesting $2,725,000, almost a $2.5 million increase, for NAS development studies and advanced concepts studies.

Question. What is the reason for this 1,000 percent increase?

Answer. Past efforts in system engineering have focused on refining the NAS design and system interfaces of the NAS Plan program to modernize FAA facilities and equipment.

FY 1988 efforts are designed to start defining NAS enhancements and service extensions beyond the NAS Plan. These extensions will build on the NAS Plan investment in facilities and equipment to meet user needs for NAS services.

Question. What alternative methods of air traffic control for the year 2010 do you plan to study?

Answer. Evolution of the air traffic control system is made possible through the increasing automation capabilities becoming available both in the ground Air Traffic Control (ATC) system and the avionics systems.

In defining past NAS Plan enhancements, we are examining automation system capabilities that would delegate much of the routine ATC to the computer system. In this later era, the controller will become the strategic planner and flow manager.

The pilot will be able to file fuel efficient user preferred routings and profiles and use onboard automation to follow these routings. Periodic interchanges will occur between ground and airborne automation systems via data link.

Question. In view of your statements that airport capacity is one of the major limiting factors of aviation growth, why are you proposing to cut your system capacity research by nearly one-half?

Answer. We did not cut our capacity research by nearly one-half. The FY 1988 request for $3,399,000 represents an increase of more than three times the FAA funding request for FY 1987 of $1,152,000. Congress provided an additional $5,500,000 to the FAA's FY 1987 budget request for system capacity, which brought the total for FY 1987 to $6,652,000.

Last year it was indicated that you planned to begin operational tests of your runway configuration management system in August 1986.

Question. What have you learned from these tests?

Answer. The development of the runway configuration management system (RCMS) testbed at Chicago O'Hare has provided valuable information on the technical requirements of the system. In particular, coding of testbed software resulted in a more precise understanding of the functional relationship between the several modes of RCMS operation and techniques/ designs for RCMS interfaces with various airport sensors and weather data bases were developed. These results have been documented and provided to the Advanced Automation Program Office for inclusion in the acquisition phase specification for the Advanced Automation System. The RCMS testbed activity in Chicago is completed.

It was also indicated last year that you planned to complete by September 1986 your safety verification flight tests regarding the possible reduction in vertical separation standards above 29,000 feet.

Question. What were the results of those tests and what actions have you taken?

Answer. Aircraft heightkeeping performance above FL 290 data collection for civil aircraft was completed in September and for military aircraft in November of 1986. The data is currently being processed and reduced for analysis by the FAA Technical Center and NASA Wallops Island. Preliminary results show that many aircraft maintain the correct altitude very well, but there are a few aircraft types that, as presently equipped, would not be able to safely fly in a 1,000-feet planned vertical separation environment. Final results from the analysis are expected by the summer of 1988. The U.S. results will then be compared with those of Europe and Japan through ICAO. If the results support a reduction from 2,000 to 1,000 feet, ICAO guidance material is expected to be prepared by late 1988 or early 1989.

Question. What is the status of your cost/benefit analysis of reducing vertical separations?

Answer. A cost/benefit analysis is currently underway. Most of the cost data has been collected. These costs are those to make the system meet the requirements of the current RTCA draft Minimum System Performance Standard. The benefit work is not as far along. The preliminary results of the analysis are due late fall 1987 with the final report due during the summer of 1988.

You are initiating a new program to develop a surveillance capability for low altitude airspace and one of the alternatives you are looking at is Loran C.

Question. Why are you considering Loran C?

Answer. A form of low-altitude surveillance can be achieved by reporting, over a data link, navigation-derived position back to the control center. Since LORAN-C provides coverage to the surface and it is being expanded to provide coverage over the contiguous United States, it is a logical choice to provide the navigation position required for the dependent surveillance system.

Question. Aren't we planning to phase out Loran C in the 1990's?

Answer. No. The draft 1986 Federal Radionavigation Plan retains LORAN-C as part of the navigation systems mix into the next century.

On pages 36 and 37 you are proposing a new research effort of more than $50 million over the next five years to develop automation aids for terminal airspace and the airport surface.

Question. Would you elaborate on what this research involves, what it might cost to implement it, and what benefits you expect to accomplish as a result of it?

Answer. There are numerous opportunities to improve the utilization of terminal airspace capacity and to enhance the efficiency of flight operations in the terminal area based on automation features. The opportunities that will be pursued are based on earlier FAA work as well as recent initiatives by NASA and the Federal Republic of Germany. Initial terminal automation aids will focus on improved traffic planning to include the planning of aircraft sequences and planning aids for handling "pop-up" aircraft requesting landing clearances (i.e., VFR arrivals). Initial automation aids are also expected to improve the controller's ability to accurately space aircraft on final approach, in particular, to support dependent operation of converging runways to lower weather minima. Later initiatives will focus on structuring the terminal airspace to provide more flexible approach and landing flight paths supported by MLS and on providing direct Mode S data link communications between ground-based ATC computers and airborne flight management computers to facilitate user preferred flight paths in the terminal area. These advanced techniques are expected to improve the utilization of terminal airspace capacity and to significantly improve the efficiency of flight operations in the terminal area.

Initial automation features for the airport surface will be focused on reducing the incidence of runway and taxiway incursions. This work will exploit ASDE and Mode S surveillance capabilities installed by the NAS Plan to provide an airport surface "conflict alert" capability. Later extensions will focus on sequencing departure traffic to the runway in accordance with local traffic management departure schedules and on surface traffic routing automation to enhance the utilization of surface capacity.

The terminal airspace and airport surface automation research planned will exploit the capabilities of NAS Plan subsystems to include MLS, Mode S, ASDE, and the AAS. For the most part, it is anticipated that service improvements will be realized by enhancing the software of the AAS. Some surveillance and communications extension, in particular, improved capabilities on the airport surface based on Mode S techniques, may be required to support some of the services. Implementation cost estimates will be developed as the R&D projects progress.

Question. On page 38, how is your new airport surface surveillance program for which you plan to spend $15.5 million over the next five years related to your airport surface traffic automation program mentioned on page 36?

Answer. The Airport Surface Surveillance program is directed at providing an enhanced capability for tracking and monitoring vehicles operating within the ATC controlled portions of the airport surface. The Airport Surface Traffic Automation (ASTA) program will utilize the enhanced surveillance capabilities to (1) detect, resolve, and thereby reduce the probability of runway/taxiway incursion incidents and (2) enhance airport surface operational efficiency through the automation assisted traffic management of aircraft operating between the ramp and the arrival/departure runways.

You are requesting $1.37 million from research to keep the ARTS (Automated Radar Terminal System) operational until the AAS is implemented.

Question. What problems are you experiencing with these systems?

Answer. The most serious current problem in Automated Radar Terminal System (ARTS III/IIIA) is supply/support. The ARTS III/IIIA 1970 technology has an obsolete part list nearing 100 items and approximately one-third of the obsolete items have no replacement and will require circuit board redesign. The problem was identified in the 1986 National Maintenance Engineering Conference Top Ten Problem List. The FAA Depot has identified critical items for life-time support. This budget item has been submitted to support Depot life-time support purchase.

Though not an immediate problem, increasing air traffic control requirements are using up ARTS III/IIIA system capacity. A software redesign/streamlining will make the existing system more efficient and increase capacity.

You are requesting $488,000 for computer-aided decisionmaking involving flow management.

Question. Would you explain how this research relates to or differs from your advanced traffic management system research mentioned on page 30?

Answer. Initially the computer aided decisionmaking for flow control was planned to be a support effort to the Advanced Traffic Management System (ATMS) project, exploring the potential application of expert system technologies while ATMS pursued a more conventional algorithmic approach. It has quickly become quite clear that expert systems are a viable and attractive flow management technology. Therefore, the FAA is in the process of restructuring this research area as an integral element of the ATMS project.

Question. Please elaborate on what you mean when you state that you "seek to determine if an expert system can 'control' basic air traffic control situations"?

Answer. The FAA has automated a great many of the tasks associated with air traffic control. Some of the automation includes: flight data processing (FDP), radar data processing (RDP), alpha-numeric data blocks, automated hand-offs, etc. While these features have greatly reduced controller workload, they have not addressed the automation of tactical control processes. Consequently, traffic must still be organized in a manner that humans can comprehend. In other words, the ATC system is evolving to the point where the human limitations are becoming a principal constraint on system throughput/capacity and the accommodation of user-preferred flight paths.

The research project described on page 61 is focusing on the extent to which basic control functions can be assigned to automation using expert systems technology with the objective of providing ATC services that are more flexible and efficient than might otherwise be possible.

Question: Would you explain the relationship between your $7,743,000 request on page 66 and the $48 million included for technical support under your Facilities and Equipment request for the AAS (p.F&E-27)?

Answer: The $180 million requested in the F&E appropriation is specifically for: Prime Contracts ($132 million) which will enable FAA to finalize the top level design for AAS ($94 million) and award the production contract ($38 million), support contracts ($28 million), and AERA laboratory ($20 million).

The $7,743,000 requested in the RE&D appropriation is to fund FAA in-house costs associated with managing and providing the technical direction for the program.

COLLISION AVOIDANCE

On page 39 and 40 you are requesting $2,522,000 for your TCAS (Traffic Alert and Collision Avoidance) research. Last year we were told that the general aviation community wanted a minimum operational performance standard before implementing TCAS 1. You indicate that this standard has been written.

Question. Is TCAS I commercially available and, if so, to what extent is general aviation purchasing it?

Answer. TCAS I is not yet commercially avialable. The proposed rule for mandated TCAS II carriage will provide the manufacturing base for all TCAS avionics. TCAS I is, essentially, a very simplified form of TCAS II and we expect TCAS II manufacturers to add TCAS I to their product line as a consequence of market demand.

Question. What is the current status of TCAS II - are there any technological problems with it, what certification and training issues remain to be resolved before TCAS II is certified for both VFR and IFR operations?

Answer. A prototype TCAS II certified for Visual Meteorological Conditions (VMC) is being flown by Piedmont Airlines. The first Limited Installation Program (LIP) flight is scheduled for July 1987. The airlines in the LIP intend to certify their units for both VMC and Instrument Meteorological Conditions. Each participating airline will develop its own operating and training procedures and will individually apply for FAA approval. We do not anticipate any major problems in certification or training. The Piedmont TCAS installation has been working very well. However, as a function of both this and the LIP evaluations, we anticipate that we may modify the software or displays to enhance performance.

You indicate that the TCAS II Limited Installation Program was modified to enhance the TCAS II units so that they can provide the capabilities of TCAS III operation.

Question. What is the status of this program?

Answer. The FAA has developed a program to upgrade TCAS II LIP units to TCAS III capability which was reported to Congress. This plan calls for a modification of the existing TCAS II LIP contracts to provide funds for the addition of the hardware and software required for TCAS III operation. There is also provision for test and evaluation of these units, including limited airline evaluation of the modified units.

In your March 10, 1987, program plan for the TCAS III limited installation program you stated that no funds have been requested for this program in fiscal year 1988.

Question. Why are no funds being requested to continue this program?

Answer. The figures presented in the referenced program plan do not reflect current FAA policy. The FAA will provide $3M in FY-88 for the TCAS III limited installation program by reprogramming of R&D funding.

Question. What specific types of aircraft do you plan to require carry TCAS?

Answer. The FAA is currently developing a notice of proposed rulemaking that will propose to require TCAS-II. This system provides the pilot traffic advisory information and a resolution recommendation which is a maneuver in the vertical plane, (dive or climb). The notice proposes to require TCAS-II systems be installed in (a) all large commercial air carrier aircraft, including foreign air carriers; and (b) in all twin engine turbine powered commuter aircraft, carrying 20 or more passengers. The notice will consider requiring a simplified TCAS-I system (which only provides traffic advisory information) for aircraft with passenger seating capacity of 10 to 19. The notice is scheduled to be transmitted for Executive Branch review in early August.

Question. Do the main user groups have any major concerns with TCAS? If so, what are they?

Answer: TCAS, in general, has a broad base of support throughout the aviation community. A difference of opinion does exist as to which TCAS (TCAS II or III) should be mandated for airline carriage. ALPA has been very vocal in their desire to see TCAS III in the airline cockpit.

The FAA program provides the means for immediate TCAS equipage (TCAS II) while ensuring that the technology for TCAS III is fully developed and evaluated. In response to Congressional directive, the FAA has initiated a program to retrofit TCAS III capability onto the TCAS II LIP units and evaluate the enhanced performance capability. Therefore, the FAA TCAS program assures that the airlines can equip immediately with a good system (TCAS II) and will in the future be capable of upgrading to a better system (TCAS III).

Question: Who will shoulder the legal liability in case of TCAS induced mid air collision?

Answer: Exposure to liability as a result of a TCAS induced accident would be no different than in other accident cases where liability is determined by the facts. The FAA would be immune from liability for TCAS defects under the Varig Doctrine.

VOICE SWITCHING AND CONTROL SYSTEM

You are requesting $36,042,000 to continue your Voice Switching and Control System (VSCS) research. Last year it was indicted that the fiscal year 1988 and subsequent year research and development costs would be $25.1 million. You now indicate that these costs will be $47.3 million, an increase of 88 percent.

Question: Why did these costs increase so much, particularly since you are more than five years into this program?

Answer: The total estimated cost of the prototype phase of the program last year was $90.9 million. This year our estimate is

$106.8 million. The increases result from growth in the amount of software required for the system ($15.9 million), development of a test simulation unit ($3.8), and minor changes in the FAA in-house costs ($.2 million).

FAA efforts prior to FY-1987 consisted of requirements definition and front end planning. It was not until the competitive contracts were awarded in October 1987 that the actual design and development of VSCS was started. As the designs have developed, it has become apparent software over and above that which was originally projected would be required to meet the operational needs of VSCS.

According to the GAO (RCED 87-8, p.25), the total cost of this program has increased from $258 million to $429 million.

Question: What has caused this increase and is $429 million a good estimate of your total cost?

Answer: The $258 million figure cited in the GAO report includes only F&E funding, while the $429 estimate includes both F&E and RE&D funding. The program estimate did increase due to an increase in the number of operating positions, addition of ACF requirements, and including redundancy in the design to increase availability and reliability of the system.

The current estimate for the program is $488.8 million. This estimate may increase with the complexity of the software, based upon the best information available 9 months after start of development. The prototype phase still has 26 months before completion, and as the design evolves, the cost estimate will be refined.

Question: What is the annual estimated future research and development procurement costs for VSCS?

Answer: Estimated future research and development costs for the prime contractors, support and FAA in-house costs are:

FY-1989	$10.1M
FY-1990	.4M
FY-1991	.4M
FY-1992	.4M

AIRPORT PAVEMENT RESEARCH

Last year it was indicated that the final report on your joint tests with NASA regarding aircraft stopping performance and ground friction measuring devices would be completed in September 1986.

Question. What did these tests show and what actions have you taken as a result of them?

Answer. Tests have been completed on 12 different concrete and asphalt surfaces. The surface conditions were dry, wet, snow, slush, and ice-covered. A total of 219 test runs were made with the NASA B-737 and FAA B-727, and a total of 1,129 test runs were made with seven ground vehicle friction measuring devices.

The final test results confirm most of the earlier reported trends and show similar results for both aircraft and ground vehicle friction measuring devices. On dry surfaces, there is a slight reduction in friction coefficient with increase in ground speed, and the type of surface has little effect on the friction coefficient. On wet surfaces, however, friction coefficient decreases with increasing ground speed, and the highest values are obtained on grooved surfaces. On snow covered surface, friction coefficient decreases very slightly with increasing speed. The average friction values for ground speeds of 20 knots to 100 knots are from approximately 0.18 to 0.15. On ice covered surface, the trend was similar to the trend for snow covered surface. However, the friction values were the lowest recorded--approximately 0.04 to 0.02.

The test results are being used to develop procedures and guidelines for airport operator/user to accurately assess runway friction capability under all weather conditions.

Question. Would you indicate for the record the eight to ten airports you plan to investigate?

Answer. The airports to be investigated for capacity and delay are based on requests by airport sponsors and the FAA regional offices. To date, all requests have not been received. Tentatively, we plan to investigate the following airports:

1. Pittsburgh, PA
2. Philadelphia, PA
3. Washington, DC (Dulles)
4. Los Angeles, CA
5. Minneapolis, MN
6. Houston, TX
7. Seattle, WA
8. Charlotte, NC
9. Salt Lake City, UT
10. San Diego, CA

HUMAN FACTORS RESEARCH

You are requesting $856,000 for controller human factors research.

Question. What major changes do you anticipate will take place in the controller's role and when will these changes occur?

Answer. To this point the FAA has made significant strides in automating many controller tasks. These automated functions (e.g., flight data processing, automated hand-offs, etc.) have reduced controller workload, increased productivity, and enhanced the effectiveness of the ATC processes. These automated functions, however, did not modify fundamentally the role of the controller. As air traffic demand increases, it is anticipated that the human will relinquish certain control functions to the automation system; the human will evolve from a traffic controller to a traffic manager.

The Human Factors program is directed at determining the appropriate role of the human in the future ATC system, which functions should be automated (as well as which functions should not be automated).

WAKE VORTEX RESEARCH

With regard to wake vortex research last year it was indicated that you still had two major technical areas with no solutions, vortex alleviation and vortex sensor development.

Question. If these problems are not resolved will this eliminate the possibility of reducing runway separation distances?

Answer. The current FAA objective for reducing the required separation between parallel runways used for independent IFR approaches is to reduce the separation standard to 3000 feet. Wake vortex considerations require a runway separation of 2500 feet or more. Hence, vortex alleviation and/or sensing are not impediments to achieving reduced separations.

GLOBAL POSITIONING SYSTEM

Question. To what extent have you resolved the system performance and integrity problems of GPS that you have supposedly been looking at for a number of years?

Answer. The FAA has been working with DOD and industry for a number of years on how to solve the coverage and integrity problems that civil aviation has with GPS. The only way to resolve the coverage problem is to provide more satellites. It is our opinion that 24 satellites in three orbital planes is the best solution. The civil integrity requirement to provide warning of out-of-tolerance performance within 10-15 seconds of the occurrence (for nonprecision approaches) is still being investigated. Two approaches to a solution are being pursued. The first, which is proven, is to establish a North American monitoring system that would communicate, through a satellite communications link, a positive indication of integrity of each satellite to all users. The second approach, which requires at least a 24-satellite GPS constellation, uses the users equipment, compares position determination from various combinations of satellites in view. This approach, which has not been technically proven, would be less expensive to the Government, but does add complexity to user equipment. It also assumes that DOD would never use the selective availability feature to reduce system accuracy. Neither of these problems will prevent civil aviation from using GPS as a supplemental system when DOD approves GPS for operational use.

AVIATION WEATHER RESEARCH

On pages 74 and 75 you requesting $1,062,000 to continue the development of an airborne wind shear detection and avoidance system. Last year it was indicated that this would be a 5-year cooperative effort with NASA.

Question. What progress have you made during the past year and are you still on schedule to complete effort within the next 4 years?

Answer. During the past year an atmospheric model has been developed which accurately produces in real time a microburst wind field that allows realistic simulations of aircraft performance in wind shears. NASA simulators are being prepared to allow piloted simulator evaluations of display and guidance for both present position and forward looking wind shear detection concepts. A rain trellis device is being installed on the NASA Aircraft Landing Dynamics Facility to allow full scale testing of the penalties of heavy rain on aerodynamic performance. Industry/government review groups have been established and are holding periodic workshops, to maximize talent applied to the problem and most effectively and quickly transfer technology.

The effort is still expected to be completed within 4 years.

Question. In view of the seriousness of the wind shear problem, how could you expedite this program?

Answer. Improvements to presently certificated wind shear systems may result from some of the earlier work, and will not require a five year wait. Other technology must be advanced in several areas, some of which must be addressed sequentially. With the current extensive industry participation, and the level of funding and manpower being provided by NASA, it is not likely that additional funds could result in any significant acceleration. If unforeseen problems occur which could delay progress, additional funds may be required in the future.

You are requesting $18,706,000 for aviation weather research.

Question. What is the most significant improvement you have made during the past year in the acquisition, processing and dissemination of aviation weather information?

Answer. The most significant weather radar improvement in FY 1987 was the test and documentation of a microburst detection algorithm for use in the terminal NEXRAD and TDWR systems.

The microburst algorithm was developed using data from the Doppler weather radar test bed at Memphis (1985) and Huntsville (1986). The algorithm was tested on live data at Huntsville.

You are requesting $11,567,000 for your Central Weather Processor (CWP) program. According to the GAO (RCED 87-8, P.43) there has been a 7-year delay in the first on-site implementation of a CWP.

Question. What has caused this delay and what is the current status of this program?

Answer. GAO compared the schedule in the 1981 NAS Plan with the CWP Program status in 1987. The program has been modified since the 1981 NAS Plan.

The 1981 NAS Plan CWP Program contained a 3-phase program. Phase I was an interim capability, Phase II was the first enhancement, and Phase III was the full CWP system. The GAO compared the 1981 Program's Phase I delivery with the present program's full-capability delivery.

Comparing the full-capability dates between 1981 NAS Plan and today, the delay is approximately 3 years - due to the addition of a prototype development phase (A-109), the addition of Full OT&E, and Development problems (Contractor slips).

Current status: Development problems have been brought under control and design reviews are being held on schedule.

Last year it was indicated that you intended to revalidate the system requirements.

Question. Has this work been completed?

Answer. Yes, the System Requirements have been validated, the NAS System Specification has been baselined, and the CWP Specification has been baselined. The CWP requirements were validated and are contained in the NAS System Requirements Document. Additional documentation validating CWP requirements and under FAA configuration control are: the NAS Level I Design Document, the NAS System Specification, and the CWP Specification.

According to GAO, the total estimated cost for this program is $155 million.

Question. Do you concur? If not, what is your estimate?

Answer. The estimate of $155 million is under review, and is apparently low, due to requirements changes prior to revalidation and schedule adjustments due to technical difficulties.

A proposal from the development contractor for an estimate to complete is currently under evaluation. The full scale development increase requested by the contractor is approximately $26 million. Life cycle cost analyses are underway to determine any impact on production cost estimates. The FAA is currently evaluating alternative approaches for cost reduction and/or earlier delivery of interim capabilities.

You are requesting $3,124,000 for CWP future interface development.

Question. Have the new sources of weather data been sufficiently developed to enable you to begin a program of interfacing with these systems?

Answer. This request is for the first increment of a five year effort to develop interfaces to new sources of weather data. Activities are under way to complete the definition of the Weather Communication Processor (WCP) interface. Other new interfacing systems are under development and initial work on interface coordination can proceed. Final interface development will be completed in subsequent years.

Question. You are requesting $3,129.000 for terminal weather radar and NEXRAD research. Since you are also requesting procurement funding for both of these programs in fiscal year 1988 (pgs. F&E-24&38), would you explain how the results of your research will be coordinated with the radar procurements?

Answer. The NEXRAD, terminal NEXRAD, and terminal Doppler weather radar (TDWR) systems have all been specifically designed with processors that are programmable and expandable to accommodate future changes to existing meteorological algorithms and the addition of new algorithms without changing existing hardware.

In the NEXRAD area the FAA is sponsoring research to determine if icing conditions can be detected by Doppler radar and, if so, to develop appropriate automatic algorithms.

In the terminal NEXRAD and TDWR area, the FAA is performing research to develop an automatic algorithm to detect the early formation of microbursts before they hit the ground and pose a threat to aircraft.

When these algorithms are fully developed, tested, and validated, they will be added to the radars through a change in the product generation software.

On page 85 you are requesting $886,000 for weather sensor enhancements and you state that the full potential of your automated weather observing system (AWOS) cannot be realized until a number of enhancements are developed, tested, and evaluated and implemented. You have been requesting procurement funds for these systems for several years.

Question. Why wasn't this system fully developed before going into the procurement phase?

Answer. Sensors for measuring general weather parameters are available. Present technology meets AWOS requirements for nontowered facilities (Aviation Standards requirement). R&D was necessary to meet AWOS requirements for towered facilities. Full potential is based on additional sensors to measure rarer phenomena such as hail and freezing rain.

AVIATION MEDICINE RESEARCH

Question. You are requesting $4,292,000 for aviation medicine research. What have you accomplishmented in this area during the past year and what do you expect to accomplish this year?

Answer. There are a number of significant accomplishments for aviation medicine research during the past year. Examples are given below.

- Tests of seat and restraint systems for use in general aviation aircraft were completed. A prototype seat for possible use in Cessna 500 type aircraft was tested to 21g. with only minor structural damage. Also, restraint systems, intended to meet the General Aviation Safety Panel (GASP) recommendations, were tested. Initial results were favorable showing that devices can be produced to withstand the 26 g. GASP requirement

- A study of human factors related to air traffic controller operational errors was completed. The study detailed operational procedures that are related to operational errors.
- A pilot judgment training manual for helicopter pilots has been produced. This manual is being reproduced by government and industry sources for use in the helicopter community.
- The 1986 FAA Employee Attitude Survey was completed. Data have been analyzed and presentations of results have been given to agency management.
- Six Cabin Safety Workshops were completed. These were attended by over 100 cabin safety representatives from various domestic and foreign airlines, government agencies, and union groups.
- A study of actual and estimated evacuation distances traversed by passengers was completed. Also, the effects of four different seating configurations on access to and flow rate through an overwing emergency exit were studied. The results of these studies supported an agency project dealing with number and spacing of emergency exits.
- A job task analysis was accomplished for the new Automated Flight Service Station positions. This was then used to develop a training plan and curriculum for such training at the ATC Academy, and plan the sequencing of changes into the currently operational FSS training program as the new AFSS training is introduced.
- A human factors study of boarding gate screening procedures for defense against hijackers was accomplished. The study detailed several procedures that could be useful to improve those defenses.
- The FAA is currently developing advisory information to promote radiation safety through educational initiatives for use by the air carrier industry. This information will be distributed, and with management cooperation, crewmembers concerned with exposure to cosmic radiation will be able to limit such by scheduling within domestic and flag route systems. An Advisory Circular on this subject should be completed and available for distribution in 1987.

Planned major accomplishments for FY 1988 include the following:

- An evaluation of two anti-hypertensive drugs will be completed to determine their compatability with aviation-related (pilot/controller) task performance.
- Test methodologies will be developed so as to assure consistent procedures in manufacturer certification of air carrier and general aviation seats. Also, performance tests of various new designer protective breathing devices will be conducted.

- Approximately seven Cabin Safety Workshops will be conducted.
- Performance tests of various new design protective breathing devices will be conducted.
- A study of alternate symbology on air traffic control radar scopes will be completed.
- A capability to study workload and performance effects on air traffic control functions will be created.
- A study of the dynamic visual acuity of pilots who have undergone cataract extraction will be accomplished. Testing will include conditions of hypoxia.
- The relative merits of alternative work-shift schedules will be studied, including the possible interaction of shiftwork effects with age and the identification of workload and fatigue analysis methodologies.
- An automated Human Performance Model has been developed to represent the controller's job in the AAS/AERA-2 environment. This will be used to assess the effects of the AERA-2 capabilities on controller workload and productivity.

Question. Would you provide for the record updated information on alcohol related accidents which was included on 819 of last year's house hearing?

Answer. The following table is submitted for your record. The FAA will continue its ongoing airman education effort in the areas of the effects of alcohol on pilot performance.

ALCOHOL FINDINGS IN PILOTS
6233 FATAL GENERAL AVIATION ACCIDENTS
CALENDER YEARS 1968-1986

YEAR	1968 to 1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	TOTAL
CASE	458	214	264	292	319	310	377	394	410	388	384	431	389	412	399	412	380	6233
ALCOHOL ABOVE .04%	50	27	19	18	36	20	33	34	34	22	25	28	27	29	19	20	16	457
PERCENT	10.9	12.6	7.1	6.1	11.2	6.4	8.7	8.6	8.3	5.7	6.5	6.5	6.9	7.0	4.8	4.9	4.2	7.3

Alcohol from fermentation has been ruled out in the above cases.

Question. Last year it was indicated that you had completed a series of regulatory packages and advisory material on aircraft seats and passenger restraint systems. Have there been any regulatory changes during the past year as the result of your research in this area.

Answer. Aviation medical research has provided the basis for standards and test criteria in two NPRM's dealing with seats and restraints. The first of these concerns transport aircraft. Dynamic test procedures for this class of passenger seats were developed at our Civil Aeromedical Institute (CAMI). CAMI research also showed that the increased levels of seat strength required in the NPRM are feasible with existing technology. The second NPRM deals with seats and occupant restraints for general aviation aircraft. The seat strength standards provided by the General Aviation Safety Panel were developed by CAMI. These standards are part of the second NPRM.

Question. What other regulation did you issue during the past year as a result of your aviation medicine research?

Answer. The final rule on "submission to alcohol tests" has been issued. This rule is closely related to the rule on "use of alcohol and drugs" issued in 1985 which established the blood alcohol concentration (.04%) at which a pilot is considered to be "under the influence." These rules are an indirect result of our aviation research. In addition to these rules, Technical Standard Order (TSO) C-13e was issued during the past year. This TSO provides standards for passenger life preservers. These standards were developed using data obtained in the Aeromedical Research Program.

Question. Last year it was indicated that you had just initiated work on new tests and procedures for screening aviation safety inspectors. What is the status of this effort?

Answer: We are in the process of developing a new aviation safety inspector (ASI) screening process, including redesign of the applicant register formation process, creation of new selection and provisional hiring tests and procedures, and development of pre-retention evaluation systems. Redesign of the register formation process includes development of field-validated disqualifiers plus job-task analysis based and field tested rating guides for use in evaluating applicants. These will become a part of a new announcement we will develop for use by the Office of Personnel Management (OPM). Selection and provisional hiring tests and procedures will include a structured system for verifying claimed experience, development of a comprehensive communications effectiveness test for measuring vital ASI-related skills, and standardized interviewing procedures to be used in interviewing applicants, measuring and verifying possession of necessary knowledges and skills. Pre-retention evaluation will include training modules in such interpersonal areas as assertiveness, communications effectiveness, and technical writing. The development of this screening process is to be completed and the system in operation in 1988. Then a selection-training tracking system will be developed to record all selection and training performances of ASI applicants as they move through our system. We then can validate our screening process variables with success in training and on the job, and use this information to further improve our personnel system.

Initial drafts of a revised supplemental qualifications statement and rating guide, list of applicant disqualifiers interviewer protocol, and comprehensive communications effectiveness test have been completed. A list of training modules for inclusion in indoctrination training to support re-retention evaluation has been completed.

Question. What were the initial results of the human performance research related to the advanced automation system and the causes for operational errors?

Answer. A great deal of effort has gone into building and analyzing a data base related to the characteristics of controllers who have been involved in operational errors. Such factors as age, sex, race, prior aviation experience, FAA academy performance and selection information will be examined to determine contributing factors. In another area, a methodology for correlation of controller workload and operational errors is being developed. This work will develop a predictive model to allow evaluation of design factors in the Advanced Automation System. This model, called the Predictive Air Traffic Control Analysis Model (PATCAM), will predict workload and performance in two highly automated future environments: The Advanced Automation System (AAS) and the AAS enhanced by the Automated En Route Air Traffic Control System (AERA).

AIRCRAFT SAFETY RESEARCH

Question. You are requesting $21,438,000 for aircraft safety.

Question. What was your most significant accomplishment in this activity during the past year?

Answer. The research and resulting data was completed to support the recent issue by the FAA of a Notice of Proposed Rulemaking (NPRM) to establish a new requirement for dynamic testing of aircraft seats covering transport and general aviation aircraft. The design and development phase of prototype thermal neutron activation (TNA) systems for screening of checked baggage and cargo of explosives was also completed.

Question. What did the evaluations in phase 1 of your smoke venting project conclude?

Answer. The work completed to date indicates that some changes in procedures and techniques can be helpful for removing smoke from the cockpit and passenger cabin. During FY 1987, a decision will be made regarding the need for and benefits of design changes to existing systems.

Question. What major crashworthiness regulations, advisory circulars, or proposed aircraft design changes have you promulgated during the past year as a result of your crashworthiness research?

Answer. The following regulatory actions occurred: A Notice of Proposed Rulemaking (NPRM) to evaluate small aircraft seating devices (Part 23 aircraft) was issued on 12/86 requiring dynamic testing of general aviation aircraft seats; a draft advisory circular "Dynamic Evaluation of Small Seating Devices" was issued 12/86, detailing guidance on methods of showing compliance with dynamic testing requirements for Part 23 aircraft; a proposed revision to Advisory Circular 145-5 was issued 10/86 to establish the maximum number of allowable retreads for bias-ply transport aircraft tires; a transport seat safety standards NPRM was issued 7/86 requiring dynamic seat testing.

Question. You have been working on aircraft icing for several years. Last year you indicated that you intended to defer updating FAR 25 Appendix C until the icing program was completed, but you would be issuing advisory circulars as the data becomes available.

Question. What advisory circulars have you issued during the past year and when do you expect to update Appendix C?

Answer. There have been no advisory circulars on aircraft icing since FY 1985. The FAA aircraft icing steering committee has recommended that changes to the FAR's and advisory material not be initiated until final recommendations and a substantiation data package can be introduced to the FAA regulatory process. The technical recommendations and technical data package are expected to be completed in FY 1989, which will then permit revision of Appendix C as required.

Question. You have been studying possible fire resistant fuels for years.

Question. What potential is there for advancement in this area?

Answer. Since the Controlled Impact Demonstration (CID), FAA has conducted an industry workshop to review the area of fire protection of fuels and has not identified a specific technique that shows sufficient promise to intitiate a new program.

In addition, the FAA is investigating the use of crash resistant fuel system improvements, i.e., rapid fuel shut-off valves, redundant fuel cutoff positions, stronger tankage, etc., to preclude the release of fuel in crash instances. The FAA will continue to monitor advancements with respect to research being conducted by industry of safe fuels.

AVIATION SECURITY RESEARCH

Question. You are requesting $10,961,000 for aviation/security research. What was the most significant accomplishment in this activity during the past year?

Answer. The most significant accomplishment in the program in fiscal year 1987 has been the successful design and development of thermal neutron activation prototypes for detection of explosives in checked baggage and cargo.

Question. Provide an outline on your baggage explosive detection program and what exactly it is you are doing this year and how it fits into your outyear program.

Answer. FY 1987 two TNA prototypes, one utilizing a radioactive neutron source and the other an electronic source, will be tested on actual baggage at airports. The initial tests of the radioactive source based unit will be in June and of the electronic source based unit in August. Concurrently, a two view x-ray unit will be used to screen the same baggage and an integration of TNA and x-ray data will be performed in order to demonstrate whether a dual sensor system offers significant advantages over a single sensor system. In addition, because of serious concerns over the viability of currently available electronic neutron sources, a design study has been initiated on an alternate, state-of-the-art electonic source called a radiofrequency quadrupole (RFO). RFO technology has recently advanced very rapidly in connection with Strategic Defense Initiative programs.

In FY 1988 it is anticipated that airport operational testing of both TNA prototypes will continue, efforts to improve the detection software of the TNA will continue as the data base grows, and the decision on whether to develop RFQ hardware for the TNA prototypes will be made. The RFQ decision will be based on the results of the design study and on operational experience with the electronic source in the second prototype. It is generally agreed that an electronic source would be preferable, but questions must be answered regarding source intensity and lifetime. Finally, a decision will be made on the effeciveness of the dual sensor approach and, if warranted, the development of a combined sensor system with advanced software concepts will be undertaken.

Question. What is your planned buy for the prototypes and for the ultimate deployment of these baggage systems in our airports?

Answer. A limited number of thermal neutron activation systems for screening checked baggage and air cargo will be purchased with fiscal year 1988 Facilities and Equipment funding. These prototypes will be deployed in selected domestic airports to provide a limited explosive detection capability, as well as to identify any operational problems associated with day-to-day operation of the system. Ultimate deployment of the explosive detection systems in the airport will be done by the air carriers who are responsible for security screening. The number and location of units deployed would be dictated by the threat of sabotage and the amount of baggage and cargo to be searched.

Question. What technology problems need to be resolved before procurement is feasbile?

Answer. With regard to the TNA approach, the technology problems appear well under control. At this point the question of viability of current electronic neutron sources for the TNA application has not been answered, but will be by late 1987. The procurement process will be initiated in late FY 1987 with the type of neutron source unspecified. The ability of an electronic source based prototype to meet performance specifications will be known early enough to be factored into any decision on contract award. If the electronic source based system is not viable, a limited quantity of radioactive source based systems will be procured.

Question. Do you foresee quantities that would support a competitive procurement and/or developing a second source producer to supply this system throughout our air transportation system?

Answer. If the decision were made based on system performance and terrorist threat level to deploy this or other explosive detection technologies systemwide, the hardware would be procured and operated by the air carriers. The product of the FAA Research and Development Program is development, design, and testing, resulting in a specification which will allow production of the technology by competing private manufacturers. The design will be made available to responsible manufacturers to produce and support this technology, providing protection not only to the traveling public but also at other high-threat locations.

Question. Are you investigating alternate neutron sources for fiscal year 1988?

Answer. The FAA has initiated a design study on the radiofrequency quadrupole (RFQ) type of electronic neutron generator. The current electronic neutron source of choice, the deuterium-deuterium (D-D) source, may have insufficient neutron production for the TNA unit and has an unknown lifetime. On the other hand, the RFQ development for a TNA application would require a costly and perhaps lengthy program, currently estimated at more than $1 million and 18 months. While neutron production and lifetime would be very adequate, the integration of the RFQ into a TNA system might require a substantial amount of engineering.

Question. What are you using now and what improvements are you looking for?

Answer. The prototypes use either a radioisotopic source, Californium-252, or a deuterium-deuterium (D-D) electronic source. It is preferred to use an electronic source, because of safety considerations and unwanted gamma radiation from the Californium-252. However, there are questions as to whether the D-D source can produce sufficient intensity of neutrons and have a reasonable lifetime. It is desired to have an electronic source such as the RFQ with very adequate neutron production and lifetime.

Question. How effective are your prototype thermal neutron activation detection systems? How long does it take to screen a bag with these systems?

Answer. Past tests of the pre-prototype experimental systems tested in the lab are close to operational requirements with respect to false alarm and detection reates; the screening rate was somewhat less than desired. Improvements to the prototype systems since lab tests (as expected as a result of evaluations this summer under planned airport field tests) are expected to result in a final system design that is highly effective with respect to meeting all operational requirements.

Based on laboratory tests, an average TNA screening time of 6 to 7 seconds per bag is expected.

Question. What is the status of your concourse security research on flammable detection and nonmetallic weapons detection?

Answer. With regard to weapons detection, the present day detection systems are capable of detecting weapons now manufactured in part out of non-metallic material, i.e., GLOCK-17 handgun. We have recommended initial research considering infrared and accoustic techniques to detect the potential future threat involving weapons manufactured totally out of non-mettallic material.

Dectection of flammable materials remains a difficult problem due to the relatively high hydrocarbon ambient conditions at an airport, and research in identifying effective detectors is continuing. (Vapor detectors are not designed to pick up flammable materials).

New techniques using infrared and accoustic techniques are being considered as a means of detecting weapons possibly made entirely of non-metallic materials.

In FY 1988 we will initiate development of the most promising technique.

Question. It appears as if you intend to reduce your overall security research. It drops from $13,311,000 in fiscal year 1987 to $10,961,000 in fiscal year 1988 and you are estimating an average of less than $6 million per year over the next four years.

Question. What is the reason for this?

Answer. Funding program levels beyond FY 1988 are considered adequate to meet the presently known aviation safety research requirements. In FY 1987, funding levels were relatively high due to the added emphasis and resources applied to expedite development of the thermal neutron activation (TNA) vapor explosive detection systems.

NOISE REDUCTION RESEARCH

Question: On page 114 you are requesting $1.45 million, an increase of $350,000 for aircraft noise reduction. Last year, however, you indicated that no significant advancements in aircraft noise reduction were foreseen in the near future.

If this is true, what is the reason for your proposed 32 percent increase?

Answer: While it is correct that no major breakthroughs in aircraft source noise reduction are foreseeable in the near term, nevertheless, significant levels of research are needed to examine potential new noise sources, and to maintain leadership in state of-the-art noise technology for existing aircraft and with respect to the impacts of noise on people.

Among those items in the on-going research program on aircraft noise are the following:

Research on noise created by aircraft powered by advanced turboprop engines, particularly as to whether en route noise standards may be needed because of the potential of such aircraft to create more noise at ground level than existing turbojets when operated at cruise power at normal cruise altitudes.

Continued research on helicopter noise in order to refine the noise certification standards for helicopters which will be issued in the near future.

Refining and updating the Integrated Noise Model (INM) which is the basic tool established by the Federal Aviation Administration and recognized and accepted nationally and in many other countries for depicting noise contours around airports.

Continued development of the Helicopter Noise Model which, when completed, will permit inclusion of helicopter noise in noise contour mapping for regular airports and will, for the first time, provide a tool to depict noise contours around proposed or existing heliports.

Research to improve the methods, techniques and equipment needed to measure aircraft noise, particularly in connection with determining compliance with the aircraft noise certification standards in Part 36 of the Federal Aviation Regulations.

Question: Also, how will this affect the ability to develop new, additional approach paths for use with MLSs at major airports?

Answer: The FAA noise abatement research will not, per se, affect the development of MLS approach paths, but the noise contouring techniques contained in the Integrated Noise Model (INM) will allow alternative MLS approach paths to be simulated and, depending on the noise contours generated, those paths with the least noise impact can be selected for actual implementation.

Question: Is NASA still spending funds on noise reduction research? If so, how much and in what areas?

Answer: The NASA research programs concerning aircraft noise reduction with which the FAA is familiar principally involve helicopter noise and advanced turbo prop aircraft noise. In both areas, FAA participates with NASA in portions of the programs. As far as FAA is aware, NASA spends about $9,000,000 per year on these programs.

STAFFING

Question. Would you provide for the record a table indicating, by appropriation, your September 30, 1986, employment, present employment, authorized positions for 1987 and 1988, and your estimated end-of-year employment for fiscal years 1987 and 1988?

Answer. See the following table.

FEDERAL AVIATION ADMINISTRATION
FULL-TIME PERMANENT POSITIONS - YEAR END
EMPLOYMENT-FISCAL YEARS 1986-1988

	Actual Employment		Fiscal Year 1987 Estimate		Fiscal Year 1988 Estimate	
	Sept. 30, 1986	Apr. 30, 1987	FTP Pos.	Year-End Employment	FTP Pos.	Year-End Employment
Operations..........................	42,297	42,703	45,266	42,715	45,044	43,043
Headquarters Administration........	488	495	507	482	510	485
Operation and Maintenance, Metropolitan Washington Airports..........................	620	685	720	--	--	--
Aviation Insurance Revolving Fund............................	2	2	2	2	2	2
Facilities and Equipment (Airport and Airway Trust Fund)..	943	1,146	1,162	1,050	1,162	1,118
Research, Engineering and Development (Airport and Airway Trust Fund)......................	789	602	645	613	645	613
Subtotal, Direct.................	45,139	45,633	48,302	44,862	47,363	45,261
(General Fund).....................	(43,407)	(43,885)	(46,495)	(43,199)	(45,556)	(43,530)
(Trust Fund).......................	(1,732)	(1,748)	(1,807)	(1,663)	(1,807)	(1,731)
Reimbursements.....................	379	397	488	488	488	488
Total, FAA.......................	45,518	46,030	48,790	45,350	47,851	45,749

Question. Would you indicate for each activity the fiscal year 1986 and 1987 position levels shown in your 1987 budget, the fiscal year 1987 level approved by Congress and the fiscal year 1987 level shown in your 1988 budget?

Answer. The information follows.

FEDERAL AVIATION ADMINISTRATION
FULL-TIME PERMANENT
POSITION (DIRECT) LEVELS

Appropriation/activity:	FY 1987 CONGRESSIONAL BUDGET REQUEST FY 1986	FY 1987 CONGRESSIONAL BUDGET REQUEST FY 1987	APPROVED BY CONGRESS FOR FY 1987	FY 1988 BUDGET REFLECTS THIS LEVEL FOR FY 1987
Operations:				
Air traffic	25,130	24,559	25,222	25,222
Systems maintenance	10,397	10,038	10,397	10,397
Installation and materiel	1,491	1,491	1,491	1,491
Aviation standards-regulatory	2,588	2,726	2,948	2,928
Aviation standards-certification	775	775	775	793
Aviation standards-aircraft	821	821	821	821
Aviation standards-security	436	436	436	429
Aviation standards-medical	225	225	225	225
Aviation safety	41	41	41	42
Airports	472	472	472	472
Development direction	138	138	138	138
Human resource management	1,295	1,295	1,295	1,306
Direction, staff, and supporting services	1,005	1,005	1,005	1,002
Headquarters administratioin	501	507	0	0
Operations, subtotal	45,313	44,529	45,266	45,266
Headquarters administration	0	0	507	507
Operation and maintenance, MWA	707	707	720	720
Facilities and equipment	962	1,162	1,162	1,162
Research, engineering, and development	845	645	645	645
Aviation insurance	2	2	2	2
FAA, grand total	47,831	47,045	48,302	48,302

Question: Would you provide for the record a table on Workload Indicators?

WORKLOAD INDICATORS AND INDUSTRY TRENDS

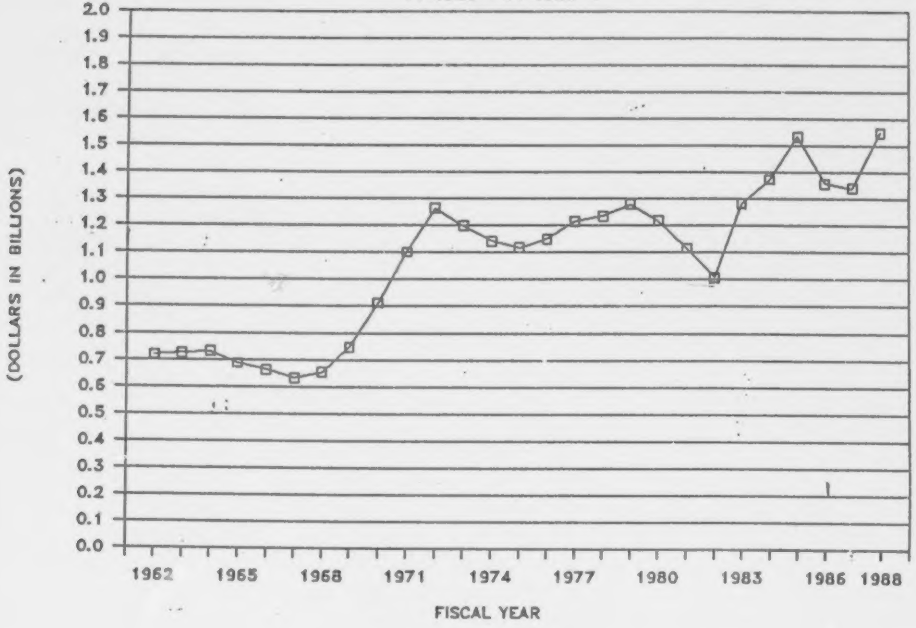
Fiscal Year	1985	1986	1987	1988
Forecast Made in February 1983:				
Aviation Fuel Consumption (Billions of gallons)	10.9	11.1	11.3	11.7
Revenue Passenger-Miles (Billions) 1/	307.3	321.0	338.0	356.3
General Aviation Hours Flown (Millions)	45.8	47.8	49.6	51.8
IFR Aircraft Handled (Millions)	31.6	32.8	34.0	35.2
Total Operations at Airports with FAA Towers (Millions)	68.1	73.8	78.4	81.5
Instrument Operations Handled by FAA Towers (Millions)	40.9	42.6	44.3	46.0
Forecast Made in February in 1984:				
Aviation Fuel Consumption (Billions of gallons)	10.5	10.7	11.0	11.2
Revenue Passenger-Miles (Billions) 1/	315.5	329.9	347.7	365.6
General Aviation Hours Flown (Millions)	39.1	41.1	43.3	45.9
IFR Aircraft Handled (Millions)	32.1	33.1	34.0	35.1
Total Operations at Airports with FAA Towers (Millions)	61.1	65.8	70.3	74.5
Instrument Operations Handled by FAA Towers (Millions)	39.4	40.8	42.4	44.2
Forecast Made in February 1985:				
Aviation Fuel Consumption (Billions of gallons)	10.9	11.2	11.4	11.7
Revenue Passenger-Miles (Billions) 1/	318.3	332.0	350.9	369.6
General Aviation Hours Flown (Millions)	36.7	38.0	39.2	40.5
IFR Aircraft Handled (Millions)	32.8	33.9	35.0	36.1
Total Operations at Airports with FAA Towers (Millions)	59.5	62.9	66.5	70.6
Instrument Operations Handled by FAA Towers (Millions)	39.1	40.9	42.3	43.6
Forecast Made in February 1986:	Actual			
Aviation Fuel Consumption (Billions of gallons)	11.1	11.8	12.2	12.5
Revenue Passenger-Miles (Billions) 1/	330.6	346.5	369.2	389.2
General Aviation Hours Flow (Millions)	36.2	37.3	38.1	39.1
IFR Aircraft Handled (Millions)	32.7	34.0	35.1	36.1
Total Operations at Airports with FAA Towers (Millions)	57.9	59.8	61.8	63.9
Instrument Operations Handled by FAA Towers (Millions)	38.7	40.6	42.3	43.8
Forecast Made in February 1987:	Actual	Actual(P)		
Aviation Fuel Consumption (Billions of gallons)	11.1	11.9	12.8	13.3
Revenue Passenger-Miles (Billions) 1/	330.6	358.4	378.1	401.0
General Aviation Hours Flow (Millions)	36.2	33.8	33.9	33.7
IFR Aircraft Handled (Millions)	32.7	34.1	35.4	36.6
Total Operations at Airports with FAA Towers (Millions)	57.9	58.9	60.5	62.3
Instrument Operations Handled by FAA Towers (Millions)	38.7	40.4	41.7	43.0

1/ Total System, Domestic Plus International Scheduled Revenue Passenger-Miles
P/ Preliminary

FUNDING/CONSTANT DOLLARS

Question. Would you insert a chart similar to that on page 6 of your justifications including FAA funding in constant dollars?

Answer. See the following chart.



FAA FUNDING IN CONSTANT DOLLARS

FY 1962 – FY 1988

TRUST FUND SHARE/OPERATIONS

Question. You are requesting $3,248,288,000 for operations with $2,415,891,000 or nearly 75 percent of this amount to come from the Airport and Airway Trust Fund. How is this Trust Fund share determined?

Answer. The increased Operations funding in the Administration's proposal is directly linked to the Administration's goal to assure that users of Federally provided services pay their fair share of costs incurred in providing those services.

The most recent cost allocation study conducted by the FAA found that air carrier and general aviation use of services accounted for 85 percent of FAA costs.

To recover appropriate user costs, 85 percent of all FAA costs should be funded through user contributions deposited in the Airport and Airway Trust Fund.

In order to recover 85 percent from the Trust Fund, 75 percent of FAA Operations funding must be recovered from the Trust Fund, since AIP, F&E, and R,E&D are financed at 100 percent through the Trust Fund.

This is an increase from the amount of funding of Operations from the Trust Fund which was recovered over the period 1982 through 1987 when only an average of 27 percent of operations funds were so financed and total FAA budget recovery from the Trust Fund averaged 57 percent.

Question. Why do you believe this increased user contribution is warranted?

Answer. The FAA has just completed a new cost allocation study to recalculate the shares of FAA costs attributable to various categories of aviation system users. Results of the new study indicate that 13.4 percent of all FAA costs currently result from services for military or other public use aviation, and that remaining costs are attributable to air carrier and general aviation users. These findings reaffirm the conclusion of the 1978 study which found 85 percent of FAA costs resulted from providing services to air carrier and general aviation. There appear to be no overwhelming arguments why general taxpayers should support system costs incurred beyond military and other public service aviation. Accordingly, the FAA believes that requiring air carrier and general aviation users to pay their full share of costs is warranted. Repeated cost allocation studies show that share to be at least 85 percent.

FERS ESTIMATE

Question. Would you provide for the record a detailed breakdown of how you arrived at your fiscal year 1988 budget request for FERS, including your assumptions regarding the number and percentage of your personnel automatically covered by FERS, the number and percentage assumed to transfer from the current program into FERS, the assumed federal contributions to the thrift plan, and what your experience to date is regarding each of these and any other major assumptions used in determining your FERS request?

Answer. The FY 1988 budget request for the Federal Employees' Retirement System (FERS) for the Operations appropriation was developed on the basis of assumptions and formulas provided by the Office of Management and Budget (OMB). These calculations were predicated on aggregate payroll costs rather than the number of employees in each category.

For the FY 1988 request, it was assumed that 40 percent of the personnel or 18,018 employees would transfer from the Civil Service Retirement System (CSRS) into FERS; all post-1983 hires would automatically be covered by FERS, and; that Federal contributions to the thrift plan would be calculated at 3 percent of the aggregate payroll costs for post-1983 hires and 4 percent for those switching from CSRS to FERS. Our experience to date regarding all these assumptions is fairly limited. The thrift plan was not effective until the first pay period in April. The percentage of current CSRS employees transferring to FERS will not be known until the beginning of 1988 since those transferring cannot do so until July, 1987.

Question: Would you also provide for the record a breakdown of your fiscal year 1988 FERS budget request among your nine activities.

Answer:

Activity	Amount
Air Traffic	$117,044,000
Systems Maintenance	23,451,000
Leased Communications	0
Installation & Materiel	2,697,000
Aviation Standards	11,932,000
Airports	1,182,000
Development Direction	407,000
Human Resource Management	2,739,000
Direction, Staff & Supporting Services	2,048,000
Total	$161,500,000

TRAVEL COSTS

Question. You indicate that your fiscal year 1986 travel costs were $22 million less than you estimated they would be last year and your fiscal year 1987 travel costs are $12 million less than you estimated last year. Why did your 1986 and 1987 travel costs come in so far below your original request and how confident are you in your 1988 request?

Answer. The 1986 travel costs were $22 million less because of the Gramm-Rudman-Hollings reductions. Travel was one area we had to cut back in order to make funds available for personnel compensation and benefits. We monitored travel closely in the first half of fiscal 1987 anticipating similar Gramm-Rudman-Hollings reductions as in 1986.

COMMUNICATIONS, UTILITIES, MISCELLANEOUS COSTS

Question. You show costs for communications, utilities and miscellaneous charges at $99 million in 1986, $257 million in 1987 and $326 million in 1988. What is the reason for the large increases in this area?

Answer. In FY 1986, funding for the Defense Commercial Communications Office (DECCO) was shown on a separate line as an allocation to the Department of Defense. In FY 1987 and 1988, these funds were added in the communications, utilities and miscellaneous charges instead of being shown separately.

OTHER SERVICES

Question. You are also requesting an increase of $98.5 million, or more than 40 percent for other services. What are the reasons for this increase?

Answer. The increase of $98.5 million in other services is the result of the following:

- o $31 million contract for automation support in air traffic that was previously funded in the F&E appropriation;
- o $15 million contract for pilot maintenance;

- o $15.8 million for contractual training services;
- o $4.4 million for repairs and maintenance to ADP equipment;
- o $5.4 million for A-76 contractual services;
- o $4.7 million for Leased Telecommunications Transportation Support Center;
- o $1.8 million for software licensing;
- o $2.5 million for Flight Service Automation System;
- o $30 million for aircraft routine inspection and repair/modifications; and,
- o $14.9 million for miscellaneous contractual services.

Question. What are some of your major contractual studies?

Answer.

OTHER SERVICES
Operations Appropriation Fiscal Year 1988 Estimates
(Dollar Amounts in Thousands)

	FY 1986 Actual	FY 1987 Column of FY 1988 Congressional	FY 1988 Column of FY 1988 Congressional	Difference FY 1988 Over FY 1987
Reimbursement to airlines for screening devices.....	2,689	805	0	(805)
Air Marshal program reimbursement				
for international flights........................	979	1,045	0	(1,045)
Contract maintenance..............................	4	57	59	2
Film production distribution......................	15	83	86	3
Mail room contract................................	70	80	90	10
Telecommunications - maintenance/operators..........	244	243	313	70
Security investigations...........................	322	311	314	3
Audio visual services.............................	1,277	417	368	(49)
Federal Air Marshal...............................	181	264	395	131
Licensing fee for Host computer.....................	0	0	400	400
Contractual studies...............................	0	115	400	285
USAF training of K-9 teams........................	358	400	416	16
Boeing wind shear contract........................	2,437	703	718	15
Substance Abuse Program...........................	500	800	1,000	200
Technical Center:				
Sector operations support contract................	1,500	1,600	2,300	700
Other engineering support.........................	1,450	1,200	1,500	300
Operation of Contract ATC Towers....................	1,046	1,262	1,309	47
Physical examinations.............................	1,493	1,706	1,721	15
Software licensing................................	0	0	1,800	1,800
Aviation Safety Reporting Program..................	1,500	1,500	1,900	400
AAC - Engineering design and support................	1,697	2,009	2,090	81
Storage of Household Effects.......................	1,785	2,105	2,416	311
Flight Service Automation System (FSAS).............	0	0	2,496	2,496
Nonflight training................................	1,046	2,451	2,848	397
Repair/maintenance of administrative, operating,				
working and test equipment........................	3,860	3,720	3,819	99
Contractual cost of exchange & repair items:				
General stocks and stores.........................	9,222	9,492	10,691	1,199
Aircraft stocks and stores........................	2,861	2,704	3,328	624
Overhaul of aircraft engines......................	3,150	4,930	4,524	(406)
Center operations and maintenance services..........	4,517	4,394	4,192	(202)
Maintenance planning support......................	4,535	4,800	4,800	0
Airport capacity program..........................	2,200	3,161	4,948	1,787

Aircraft rental	3,962	4,538	5,217	679
Regulatory analysis	2,060	5,666	5,229	(437)
Aircraft Routine Inspection and Repair/Modifications	3,206	2,688	5,713	3,025
Repair, alteration and maintenance of administrative buildings and grounds	4,624	6,918	6,945	27
Aviation Safety Analysis System (ASAS)	4,300	7,000	7,000	0
Repair, alteration and maintenance of technical buildings, facilities & grounds	5,366	7,271	8,259	988
Contractual time-sharing teleprocessing services	4,176	7,003	8,289	1,286
Leased Telecommunications - - Transportation Support Center	3,217	3,942	8,656	4,714
Flight training	6,683	9,066	10,558	1,492
A-76 Contractual Services	5,689	5,907	11,348	5,441
Contractual data processing services	6,890	12,240	13,359	1,119
Janitorial and Guard Service	14,476	13,601	14,201	600
Aeronautical charting services	11,890	13,801	14,312	511
Repair and maintenance of ADP equipment	4,753	10,280	14,720	4,440
Pilot Maintenance Contract	0	0	15,000	15,000
Automation Support Contract	0	0	31,000	31,000
Contractual training services	24,681	37,165	52,976	15,811
Not otherwise classified	23,895	32,923	36,852	3,929
Total -- Other Services	180,806	232,366	330,875	98,509

Question. Would you provide for the record a breakdown by month of your projected end-of-month employment for fiscal years 1987 and 1988 under your Operations appropriation.

Answer. Listed below are our end-of-month estimated employment figures for fiscal year 1987 and fiscal year 1988.

Fiscal year	End-of-month Employment
1987:	
October	42,221
November	42,348
December	42,321
January	42.251
February	42,210
March	42,591
April	42,612
May	42,632
June	42,653
July	42,674
August	42,694
September	42,715
1988:	
October	42,742
November	42,770
December	42,797
January	42,824
February	42,852
March	42,879
April	42,906
May	42,934
June	42,961
July	42,988
August	43,016
September	43,043

STAFFING

Question. You state that no dollar savings are associated with these FTE savings because of contractual startup costs, transitional costs, and personnel separation costs. However, last year it was indicated that you would realize some dollar savings in 1987 and 1988 as a result of your fiscal year 1986 A-76 reviews. How much dollar savings are you realizing in fiscal year 1988 as a result of your prior year A-76 and efficiency reviews and where are these savings reflected in your budget?

Answer. Dollar savings which we will realize during FY-88 are not possible to state at this time. We are expecting a full A-76 study and some management efficiency studies to be completed in FY-88. These studies are not at a stage where savings can be established. Presently, potential savings are not reflected in the budget, but actual savings will be reported as they accrue.

FPL/DEVELOPMENTALS

Question. You indicate that you do not have a FTE breakdown between FPL controllers and developmentals for your centers and towers.

What is your current employment of FPL controllers and developmentals for your centers and towers?

Answer.

CONTROLLER WORK FORCE

(Full Time with Permanent Appointments)

As of April 30, 1987

Type Employment	Terminals	Centers	Totals
FPL Controllers	5,750	3,813	9,563
Developmentals (GS-11/12/13)	443	1,185	1,628
Operational Controllers	6,193	4,998	11,191
Developmental Pipeline (GS-05/07/09)	505	1,969	2,474
Total Controllers	6,698	6,967	13,665

RETIREMENTS

Question. On page 22, to what extent is your experience to date during fiscal year 1987 consistent with your estimated air traffic retirements for 1987?

Answer. We project retirements based on calendar year since, historically, most people retire at the end of the year to take advantage of the tax year.

Through the first four months of calendar year 1987, 167 ATCS's (tower and center combined) retired. This is about 30 percent less than last year's rate for the same period, which was 228 retirees. If the downward trend continues, we will recalculate our projection for calendar year 1987.

Question. How many center and tower personnel actually retired during the first six months of this fiscal year, and have you seen any trend that might cause you to change your original estimate?

Answer. Retirements are running about 30 percent behind last year's rate. We will recalculate our projection for calendar year 1987 if the downward trend continues.

CENTER STAFFING

Question. You are requesting 9,793 positions and $565,165,000 for your centers.

What is your current employment?

Answer. Employment as of 4/30/87 is 9,456.

Question. What employment levels are assumed for centers as of September 30, 1987, and September 30, 1988?

Answer. The estimated employment will be 9,356 and 9,524 respectively.

Question. Would you provide for the record a table showing hours and costs of overtime in your centers for fiscal years 1981 through 1988?

Answer.

Fiscal Year	Hours	Amount
1981	313,410	$ 8,973.5
1982	977,289	30,573.6
1983	689,453	22,350.5
1984	672,559	21,169.9
1985	615,037	19,004.8
1986	394,159	12,719.5
1987 (est)	555,239	18,672.9
1988 (est)	507,820	17,202.9

Question. You are proposing to add 50 supervisors and 71 controllers to your centers in fiscal year 1988.

How did you arrive at these requested increases?

Answer. In fiscal year 1987, we added 300 controllers to the en route work force and did not add any supervisory positions.

For fiscal year 1988, we are requesting the supervisory positions for the fiscal year 1987 and fiscal year 1988 increases in the controller work force in order to maintain our 6.5 to 1 ratio.

Question. Would you provide for the record a table showing authorized positions and employment for each of your centers as well as authorized developmental controllers, onboard developmental controllers and onboard full performance level controllers?

Answer.

Center	Authorized 1	Current 2	Developmental controllers on board	FPL's on board
Anchorage, AK	165	144	79	49
Kansas City, MO	377	361	109	209
Washington, DC	457	359	91	239
New York, NY	328	310	104	171
Chicago, IL	426	417	194	188
Indianapolis, IN	330	295	130	140
Minneapolis, MN	323	295	111	143
Cleveland, OH	465	454	182	230
Boston, MA	354	293	90	176
Denver, CO	367	320	99	189
Salt Lake City, UT	213	191	52	116
Seattle, WA	216	243	75	133
Jacksonville, FL	387	371	119	206
Miami, FL	271	269	94	144
Memphis, TN	353	312	105	173
Atlanta, GA	551	448	95	306
Albuquerque, NM	328	292	67	182
Fort Worth, TX	415	377	106	225
Houston, TX	344	358	102	206
Honolulu, HI	71	73	15	38
Los Angeles, CA	365	358	144	173
Oakland, CA	298	328	151	146
Guam, MI	12	11	0	11
San Juan, PR	44	43	15	20
Total	7,460	6,922	2,329	3,813

1--Authorized total controller workforce, there is no seperate authorization for Developmental controllers.
2--Total Controller Workforce employment as of April 30, 1987

TOWER STAFFING

Question. You are requesting (p. 29) 10,107 positions and $537,979,000 for your towers. Do you have any significant controller work force shortages at any of your terminal facilities?

Answer. We are not currently experiencing any significant controller work force shortages in our terminal facilities.

Question. If so, which ones and, if not, why are you requesting an increase of $4,435,000 for change-of-station moves (p. 30)?

Answer. The increase of change-of-station costs is due to the increased costs of the relocation services contract and the higher than anticipated average costs of moves.

Question. Would you indicate for the record the current employment at your towers and the end-of-year levels your budget assumes for fiscal year 1987 and 1988?

Answer. The current employment of controller work force at terminal facilities as of April 30, 1987, is 9,931. We anticipate end-of-year employment for fiscal years 1987 and 1988 to reach 9,731 and 9,839 respectively.

TOWER OVERTIME

Question. Last year on p. 510 of the House Report it was indicated that the overtime at your towers would be 77,870 hours in fiscal year 1987. However, you now indicate that your fiscal year 1987 base will be 336,706 hours (p. 31), an increase of 333 percent.

How do you explain this, particularly since the number of terminal instrument operations for fiscal year 1987 is now estimated to be less than you had projected last year (41.7 million vs. 42.3 million)?

Answer. The 77,870 estimate for 1987 was the goal of overtime usage. The higher estimate is due to unanticipated requirements for training, unscheduled leave and staffing shortfalls in certain facilities.

Question. Would you provide for the record a table showing hours and cost of overtime in your towers for fiscal years 1981 through 1988?

Answer.

Fiscal Year	Hours	Amount
1981	418,616	$10,249.0
1982	842,590	22,619.2
1983	469,407	13,143.4
1984	383,288	10,066.2
1985	292,909	7,724.8
1986	216,233	6,067.5
1987 (est)	336,706	10,018.6
1988 (est)	287,351	8,488.6

FY 1987 OVERTIME GOAL

Question. Last year you stated that you expect to achieve an overtime goal of 630,000 hours in FY 1987.

What is your latest estimate of the total overtime needs for fiscal year 1987 and the reasons why your estimate varies from your goal?

Answer. The present goal for total overtime for fiscal year 1987 is 1,043,100 hours and $32,069.8. This is for all activities under the Air Traffic subactivity. The goal for overtime is the estimate for fiscal year 1987.

NEW TOWERS

Question. You indicate that you will be commissioning three additional VFR towers and one new full radar approach control tower in fiscal year 1988. How many additional controller positions will be required to operate these facilities?

Answer. The three VFR towers are as follows:

San Luis O'bispo, CA - 9 controller positions

McAllen, TX - no additional controller positions. The tower is already staffed. The facility will be reclassified to a VFR tower when the non-radar approach control function, now performed by the tower, is transferred to a radar facility.

Brownsville, TX - same as McAllen, TX.

The new full radar approach control tower is scheduled for Moses Lake, WA. The facility is already staffed but commissioning of the radar approach control function will require 6 additional positions.

OPERATIONS/STAFFING

Question. Last year it was indicated that your requested fiscal year 1987 increase was based on the need for full performance level controllers in future years. At that time you were projecting 66 million aircraft operations by 1989.

What is your current estimate for aircraft operations for 1989?

Answer. The present estimate for aircraft operations for 1989 is projected at 64.1 million.

TERMINAL HUB STAFFING

Question. It was also indicated that your fiscal year 1987 increase was based, in part, on the airlines creating new hubs.

To what extent is this factor considered in developing the requested controller work force requirements for your towers?

Answer. The aviation forecasts developed by the Office of Policy and Plans (APO) are used in the staffing standards and they are formulated with hubs considered.

Question. If it is used, what does your budget assume will happen in this area over the next two or three years?

Answer. The airlines keep APO advised of their intentions in hubbing and that information is included on all future forecasts.

GENERAL AVIATION INSTRUMENT OPERATIONS

Question. Last year it was indicated that the percent of general aviation instrument operations at your towers had decreased from 49.7 percent in 1981 to 42.4 percent in 1985.

Has this trend continued in 1986 and 1987?

Answer. General instrument operation percentages are projected to decrease to 41.6 in 1986 and 41.5 in 1987.

FLIGHT SERVICE STATIONS

Question. On page 33 you are requesting 4,225 positions and $220,329,000 for your flight service stations. This is a proposed reduction of 185 positions from your fiscal year 1987 level. You also had a similar reduction for the current fiscal year. To what extent has your fiscal year 1987 staffing reduction been implemented and has this reduction had any impact on your ability to meet your flight service demand?

Answer. The number of authorized positions for FY 1987 is 4,410. As of May 31 the number of on board full-time permanent FSS employees was 4,255. The end of year employment for FY 1987 is 4,190.

Due to budgetary constraints incurred during fiscal year 1986, FAA was not able to accomplish the scheduled AFSS commissionings and FSS consolidations. Consequently, we did not achieve the benefits anticipated from those activities. The resulting staffing irregularities have resulted in a reduction of hours of operation at some of our smaller FSS's. For the most part essential services have been maintained to the affected areas from adjacent facilities.

Question. You currently have 4,410 positions assigned to your flight service stations. What is your present employment and what does your budget assume for September 30, 1987; and September 30, 1988.

Answer. As of May 31, the number of full-time permanent FSS employees on board was 4,255. The end of year employment for fiscal years 1987 and 1988 are 4,190 and 4,014 respectively.

PLANNING, DIRECTION, AND EVALUATION

Question. Last year on P.520 of the House Report it was indicated that you would have a reduction of 124 positions under your planning, direction and evaluation activity (p.36) in fiscal year 1988. Why isn't this reduction reflected in your budget request?

Answer. The FY 1987 President's Budget assumed that the Air Traffic software maintenance function currently performed in-house at the FAA Technical Center would be contracted out by FY 1987 saving 124 FTE's in FY 1987 and 124 positions in FY 1988. The recommendation was made in anticipation of favorable results from a proposed A-76 study. Implementation of that study is behind schedule and these savings will not occur as projected. FAA has requested the 124 FTE's to be restored in an FY 1987 Supplemental request and one-half of the FTE's are asked for in the FY 1988 President's Budget. This means we are currently projecting a saving of 62 FTE's in FY 1988. If the study is completed in FY 1988 and the FTE's saving occurs, the positions will be taken afterwards.

INSTALLATION AND MATERIEL SERVICES

Question. Last year you indicated that your fiscal year 1986 program level under this activity would be $183,957,000. You now (p. 39) indicate that your actual 1986 program level was $192,271,000. Why weren't you able to achieve the savings you anticipated in fiscal year 1986?

Answer. We had a number of higher costs for contract services in the building maintenance area, and also for commercial repair of some more sophisticated equipment.

Question. Last year it was indicated that your automated materiel handling system was scheduled to be commissioned in December 1986 with savings starting in fiscal year 1987. What savings do you expect to realize from it in fiscal years 1987 and 1988? If there are savings, where are they reflected in your budget justifications?

Answer. We have hardware nearly completed in its installation. Commissioning is now tentatively scheduled for September of 1987. Therefore, there will be no savings in fiscal year 1987. We expect cost avoidance savings of $1,700,000 in fiscal year 1988.

FTS COSTS

Question. What are your total estimated fiscal year 1988 costs for FTS?

Answer. The estimated fiscal year 1988 costs for FTS are $11,948,000.

SLUC/RENT

Question. On page 50 you are requesting an increase of $5,865,000, about 17 percent, for rental payments to GSA. This is on top of the 12 percent increase in fiscal year 1987. What reason did GSA provide for these rate increases?

Answer. GSA did not provide specific reasons for the increase in effect for fiscal year 1988. However, we understand that GSA's goal is to bring rental rates for space in line with rates being charged by the private sector.

FIELD MAINTENANCE STAFF

You are estimating that your field maintenance employment will be 8,188 personnel as of September 30, 1987.

Question. What is your present employment?

Answer. Our current onboard employment for field maintenance as of April 30, 1987 is 8,253.

FACILITIES COMMISSIONED

Last year you indicated that you planned to commission 121 new facilities in fiscal year 1987.

Question. How much progress have you made to date and do you expect to meet your projected level?

Answer. The number of facilities commissioned through the second quarter of FY 1987 are listed below:

Automated Flight Service Station	8
Direction Finder	5
Remote Communications Outlet	2
Approach Light System	6
Distance Measuring Equipment	8
Instrument Landing System	7
Omnidirectional Airport Lighting System	2
Runway End Identification Light	4
Runway Visual Range	2
Visual Approach Slope Indicator	23
Total	67

Among the facilities you planned to commission were 15 automated flight service stations, 12 microwave landing systems and 28 VASI's (Visual approach slope indicators).

Question. Would you indicate how many of these have actually been commissioned to date?

Answer. As of the second quarter FY 1987, we commissioned 9 automated flight service stations, and 23 visual approach slope indicators.

ENGINEERING STAFF

You are requesting 663 positions and $49,459,000 for your engineering staff.

Question. What are some of the workload measures you use to determine the size of your engineering staff?

Answer. The workload measures used to support regional office maintenance engineering positions are:

1. Number of commissioned facilities supported.
2. Number of field maintenance positions supported.

Washington office maintenance engineering positions are based on experience and judgment.

LEASED TELECOMMUNICATIONS

You are requesting $230,014,000 for this activity, and increase of $53,187,000 or 30 percent over fiscal year 1987. This increase would have been even greater if you hadn't transferred $9,423,000 to your field maintenance activity.

Question. What explains this increase?

Answer. Of the $53,187,000 increase requested for Fiscal Year 1988, $20,535,000 is required to support the level of service carried into FY 1988. Much of the remainder is needed in conjunction with NAS Plan implementation, which is progressing rapidly and includes significant communications requirements.

Question. What are the estimated cost increases for leased telecommunications services for each of the next five years?

Answer. The projected five-year telecommunications cost increases are shown in the table below. These leased telecommunications 5-year estimates are developed in accordance with the programs described in current agency planning documents. The projected costs, therefore, are subject to change pending management's review, reassessment and approval of program requirements, and unanticipated program increases or decreases (e.g., tariff and rate increases, etc.).

Fiscal Year:	Estimated Amounts
1988	$53,187[1/]
1989	24,824
1990	13,746
1991	11,796
1992	10,726

[1/] Includes the FY 1987 supplemental requests of $20,535,000 and annualization of services initiated in FY 1987.

Although the projections cited above reflect large increases in leased telecommunications costs, in many cases these increases result from new equipment, equipment replacement, and/or facility consolidations which result in reductions in air traffic and some maintenance personnel, and other costs.

Rates and tariffs for private line, point-to-point leased telecommunications services have increased by more than twice the rate of inflation for the past 3 years. We foresee no change in telephone company business operations or regulatory agency policies that would change this pricing environment. Therefore, we expect this trend to continue.

Decrease in leased telecommunications costs over the next 5 years will be accomplished through: implementation of the RCL program (reduction of center-to-center and center-to-tower connectivity costs), the Data Multiplexing Network, and the National Airspace Data Interchange Network-II; purchase of the Integrated Communications Switching System (ICSS) and the Voice Switching and Control System; and a reduction transfer in ICSS maintenance costs to systems maintenance.

TELECOMMUNICATION COST SAVINGS

Last year you estimated fiscal year 1987 savings amounting to $2 million from your radar microwave link replacement program, $2.5 million from your multiplexing network, and $10 million from your leased telecommunications management system.

Question. Do you still expect to achieve these cost savings during the current fiscal year?

Answer. The RML replacement program was delayed by technical difficulties, and the savings in this program were not realized in FY 1987.

Full implementation of the planned portions of the multiplexing network was not completed in FY 1987 due to the temporary suspension of the equipment supplier (Paradyn). This suspension has since been lifted, and this program is again proceeding. The part of the data multiplexing network which is currently in place is yielding savings or cost avoidance at over $9 million per year.

Leased communications management efforts have been very successful. The full $10 million savings were realized.

INTERPHONE COSTS

From fiscal year 1980 to fiscal year 1986 your interphone costs more than tripled. Last year you estimated that these cost would increase by about $20 million over the next five years. However, your requested increase for fiscal year 1988 is $22,268,000 (p.83) which is more than you estimated 5-year cost increase of just one year ago.

Question. How do you explain this?

Answer. Our testimony last year referred to an increase in recurring costs of these new interphone circuits. There are also large nonrecurring costs associated with installing new service, particularly for RCL where microwave sites are in remote locations and special construction is required to bring service to the site. Because of the delays in the RCL program, much of the new construction planned for FY 1987 has been pushed into FY 1988 thus doubling up on these nonrecurring costs.

RADIO COMMUNICATION LINK

Your justification refers to "tremendous future savings" from your new radio communications link (RCL) network.

Question. What is your quantitative estimate of these savings?

Answer. Our quantitative estimates of these savings are:

FY 89	FY90	FY91	FY92
10,686	19,463	32,828	42,463

(annual savings/avoidance in $K)

Portions of these amounts are avoidance rather than reductions. Future budgets will not show decreases of these magnitudes.

Question. When might we see these savings reflected in your budget?

Answer. The first savings attributed to the RCL network are reflected in this (FY 1988) budget in an amount of $1,780,000.

FLIGHT DATA INPUT/OUTPUT (FDIO)

In Fiscal Years 1986 and 1987 (House Reports - FY-86, P.434 & FY-87, p.531) you stated that the savings from your Flight Data Input/Output (FDIO) project had been delayed. Last year you indicated that $1.4M in savings would be realized in fiscal year 1988 and $2.4M in Fiscal Year 1989.

Question. Does your Fiscal Year 1988 budget reflect a $1.4M savings from this project? If so, where and if not, why?

Answer. Savings associated with the FDIO project derive from two areas. In the leased communications program, FDIO communications are placed on the data multiplexing network. Since most FDIO sites are already served by this network, FDIO communications are essentially "free", as compared to the flight data entry and printout (FDEP) equipment it replaces. FDEP circuits were costing $2.4M annually, so the FDIO program results in a $2.4M annual savings.

Additional savings result from FDIO implementation because the equipment that it replaces -- FDEP -- is extremely maintenance intensive. This is a system maintenance but not a leased communications cost.

In Mr. Pozesky's response to last year's question, he referred to delays in equipment deliveries during FY-86, and cited only small savings projected for 1987. While that was accurate in terms of the maintenance savings to be achieved, we were able in the telecommunications area to transition the existing services onto the multiplexing network even before full FDIO deployment. Thus, the full $2.4M annual saving was achieved, with the actions occurring in fiscal years 1986 and 1987. This is reflected in our FY-88 budget as part of the FY-87 estimate (base amount).

AVIATION STANDARDS - AIRCRAFT CERTIFICATION

Question. You are requesting 793 positions and $42,003,000 for your aircraft certification activities. Your estimated workload for fiscal year 1987 appears to be significantly higher then you projected last year. For example, last year you estimated seven production certificates in 1987 and you now show 106 production certificates. How do you account for this substantial variation?

Answer. The identification of trends related to the aircraft industry and the development of highly reliable workload indicators for the aircraft certification program have historically been very difficult to achieve. This is primarily due to the extremely dynamic nature of civil and military aviation in today's world. Technological advances occur so rapidly, and their impact on all of those associated with aviation is felt so quickly that both communities, industry and government, are often forced into a reactive mode.

We are not satisfied with either the general situation vis-à-vis trend analysis or our current workload indicators, and have initiated action for improvement. The Office of Airworthiness is presently conducting a comprehensive job task analysis as part of Project SMART. A by-product of this effort will be an improved statement of program workload and performance indicators. These will be developed in time for next year. Also planned as part of the project are production certification and type certification readiness studies. These will provide insights into future designs, engineering approaches, and advanced state-of-the-art production and quality control techniques.

INSPECTIONS

You are requesting a total of 3,038 positions for operation and maintenance certification inspection activities and you indicate that 2,198 of these are for Safety Inspectors and 495 are support personnel for your inspectors.

Question. What are the responsibilities of the remaining 345 personnel under this activity?

Answer. The remaining 345 personnel are Regional and Washington headquarters positions which provide for policy development, program guidelines and evaluation, and oversight functions.

Your request would provide for 104 additional General Aviation Inspectors, 74 new Air Carrier Inspectors and 50 additional support positions.

Question. What was the basis for this allocation?

Answer. Position allocation was made based on staffing standards recently developed in conjunction with Project Safe.

WORKLOAD

Question. Your fiscal year 1987 workload indicators (p.105) are significantly higher than you estimated a year ago. For example, last year (p.119) you projected 1987 operation certifications of 20,000 compared with this year's estimate of 130,000. Have you changed the way you determine workload indicators? If not, why the drastic underestimate?

Answer. Several factors contributed to the differences between 1986 and 1987 workload indicators. These factors include more detailed activity and task descriptions, a computerized work program accounting system, updated environmental data, and more detailed accounting procedures. Workload indicators are furnished by regional offices based on projected activity. Activity projections are formulated by extrapolating from the previous year's activity and adjusting for known changes in programs and the environment. The previous year's activity is derived from data in the Work Program Management System (WPMS), a computerized system used to track work accomplishments. WPMS uses more detailed activity categories than were used in previous years. Program changes result from revisions to work program guidelines and to staffing standards used for aviation safety inspector positions. The FY-1988 budget estimate was the first one developed using a revised staffing standard which included additional tasks identified in the Project SAFE job task analysis.

The 1987 workload indicators are verified in the Report to Congress on the Safety Enforcement Program Performance of the FAA for FY-1986 which reported that 151,610 inspections or 98 percent of the estimate submitted with the budget submission were accomplished during the year. For future submissions, the current indicators will be compared to those used in the staffing standards and the most germane and most accurate data will be used.

RECORDS EXAMINATION ASSISTANCE PROGRAM (REAP)

Question. You are requesting an increase of $1.5 million for contractor support for your records examination assistance program (REAP). Who is currently performing this records review and how much is being spent annually for it?

Answer. The Washington Consulting Group is the prime contractor for the Records Examination Assistance Program and Phaneuf Associates is the subcontractor. The total pilot program contract is for $875,888 with $484,000 obligated in FY-86 and $391,888 obligated in FY-87. The pilot program is scheduled to be concluded in August 1987.

Question. This appears to be a continuing activity. Why do you believe you should use contractor personnel instead of developing or expanding your own in-house capability to perform this work?

Answer. The pilot program is an ongoing feasibility study scheduled to end in August 1987. The study may conclude that the function should be performed in-house. The FY-88 budget request is necessary to ensure program continuance (including National Aviation Safety Inspection Program support) until pilot program data are analyzed and a final decision on feasibility is made. The intent of the program is to provide resource flexibility by contracting with an auditing firm large enough to accommodate expansions and contractions in program requirements without hiring additional staff. The program also is designed to employ highly qualified auditors to examine records systems, freeing inspectors to accomplish technical tasks that represent a more efficient use of inspector expertise.

Question. Last year p.535 of the House Report it was estimated that you would get 20 to 30 workyears for $2,213,000 (about $75,000 to $110,000 per workyear). Were these estimates accurate? If not, what did you pay and, if so, would it be less expensive to do this in-house?

Answer. The Records Examination Assistance Program (REAP) project plan called for two types of records inspections to be conducted - routine and indepth. Routine REAP inspections direct costs range between $5,000 and $25,000 per operator. Costs of routine inspections are dependent on operator size and complexity, the number and type of records reviewed, and the extent of records automation. Indepth inspection direct costs range from $30,000 to $50,000 per inspection. Costs of indepth inspections also are dependent on the same factors. Both the work-year and dollar estimates in last year's budget submission appear to be accurate. Pilot program data cannot be extrapolated to project future program costs without careful interpretation because there are many additional tasks in the pilot program, such as developing program guidance, developing training material, and performing cost-benefit analyses, which will not be part of a request for proposal for continuing the REAP effort. The FY-1988 request will support 38 indepth reviews at approximately $40,000 per inspection which approximates the average cost of using REAP teams for indepth reviews under the pilot program. It does not appear that it would be less expensive to do these records reviews in-house.

INSPECTOR STAFFING

Question. Would you indicate for the record the number of Air Carrier and General Aviation Inspectors you currently have on board?

Answer. As of April 30, 1987, there were 731 Air Carrier Inspectors and 1,051 General Aviation Inspectors on board.

AVIATION SECURITY

Question. You are requesting an additional 87 positions for your Aviation Security Program. Are these personnel primarily for the airport assessment part of your program?

Answer. Following the June 14, 1985, terrorist hijacking of TWA 847, a hurried analysis of the Civil Aviation Security staffing requirements and available resources was performed. The agencywide staffing at that time was 236 (including a limited Federal Air Marshal (FAM) cadre). Based on this analysis, a best estimate of an additional 200 positions was identified for implementation of an enhanced FAM in-flight security program on high-risk international flights, implementation of a significantly increased foreign airport security assessment program (required by the International Security and Development Cooperation Act of 1985 - P.L. 99-83) and an improved inspection capability at key U.S. domestic flights, particularly those with international/domestic flights.

Experience has shown that the additional 200 positions are not meeting agency needs. FAM in-flight missions and domestic airport inspections are being conducted at a minimum acceptable level. The requirements of the foreign airport assessment program including U.S. air carrier foreign station inspections are not being met. The following factors relating to foreign airport assessments have developed:

1. Foreign airport assessments are far more complex and resource consuming than originally anticipated.
2. The number of foreign airports identified as requiring assessments increased from 140 to 187 (and we anticipate further increases).
3. The necessity for assuring the implementation of security measures adequate to protect international air travelers has dictated that we try to schedule far more frequent visits to a larger number of airports than originally anticipated. Specifically, we had identified seven (7) airports as requiring frequent visits, and now we believe this frequency to be necessary at 37 airports.

Question. You are requesting an increase of $400,000 for a Threat Assessment Study. Do you expect this study to provide any information which cannot be obtained by our intelligence community?

Answer. Since the terrorist hijacking of TWA 847 on June 14, 1985, the Office of Civil Aviation Security, utilizing some of the Congressionally authorized increased resources, has begun a carefully designed and executed plan to improve its in-house aviation security intelligence analytical capability. This effort also includes improvements in the FAA acquisition of data from the intelligence community. Data that requires analysis for any potential impact upon aviation security is being provided by the intelligence community; however, it requires considerable detailed labor-intensive analysis in the Office of Civil Aviation Security. The study would be a vital complement to activities of that office as well. It would be classified pursuant to Executive Order 12356, National Security Information, and would be conducted by a contractor-cleared under the Industrial Security Program.

AVIATION SAFETY ANALYSIS SYSTEM (ASAS)

Under planning, direction, and evaluation you are requesting an increase of $1.7 million for your Aviation Safety Analysis System (ASAS).

Question. What does this system involve?

Answer. The Aviation Safety Analysis System (ASAS) is designed to collect, store, and organize diverse types of information into an integrated system in direct support of Aviation Inspection and Safety activities. The requested funding level for FY-88 includes $1.7 million for the acquisition of 206 personal computers. The system is currently serving approximately 1,600 FAA employees located in 162 work sites using the existing 440 computer work stations. The orderly implementation and growth of ASAS is dependent upon a phased increase in the number of computer work stations. These computers will support the establishment and enhancement of airworthiness, accident prevention, investigation, airspace system utilization, and other safety-related data bases.

Question. What is the total amount requested under this heading for the ASAS?

Answer. The current funding level in direct support of the ASAS is estimated to be $10.7 million for FY-88.

Question. What is the status of implementation of this system?

Answer: Fourteen (14) subsystems are fully operational:

1. Health Information
2. Civil Aviation Security
3. Automated FARs
4. Enforcement Information
5. Automated Exemptions
6. Automated Resumes
7. Simulator Inventory and Evaluation Schedule
8. Regulatory Background Reference
9. Service Difficulty Reporting
10. Work Program Management
11. NTSB Recommendations
12. Near Mid-Air Collision
13. Manufacturing Inspection Management Information
14. Project Information and Control

Additional subsystems are in various stages of design and development:

1. Airworthiness Information
2. Automated Archives
3. Safety Analysis
4. NTSB/FAA Common Data Base
5. National Aircraft Registry Information
6. FAA Recommendations

ASAS development initiatives through 1991 include:

1. Functionally integrated system architecture
2. Artificial intelligence
3. Compact discs

Operational subsystem training has been conducted and standard agency training procedures are being established. In addition to traditional classroom training, other training alternatives are being explored, such as computer-based instruction and self-instructional training materials.

Additional IBM-compatible microcomputers will be acquired and deployed in Aviation Standards field offices nationwide by the end of calendar year 1987. Plans beyond FY-88 include the acquisition of an additional 1,000 or more IBM-compatible microcomputers through a departmental office automation technology support contract.

Improvements in ASAS on-line computer access and response time are expected to be realized in calendar year 1987, through the planned installation of a new agency telecommunications network and host computer upgrade.

Question. Is there a need to extend or otherwise enhance the analysis of data generated through the Aviation Safety reporting System? Please explain the basis for your response?

Answer. Absolutely. Increased attention is currently being given to the analytical capabilities of the ASAS. Aviation safety, because of its importance to the public, must be presented in terms of current and accurate statistics, and logical and complete analysis. Up-to-the-minute safety status information is critical: to respond to public inquiry and news media requests; to respond to Congressional inquiry and prepare Congressional testimony; and, to prepare for public appearances and speeches by DOT and FAA officials.

An inherent functional requirement of the ASAS is to have the capability to perform safety analyses. One of the first considerations for safety analysis is the establishment of processes to acquire the required types and amounts of data. However, existing ASAS subsystems were developed to meet specific and immediate needs by the Office of Aviation Standards and have resulted in the creation of a variety of individual, semi-independent software applications. Therefore, a uniform set of data standards, which will be applied to all data collection activities, must be developed and sophisticated analysis techniques must be utilized to their fullest. The types of safety-related analyses ASAS must be capable of performing require both existing data bases, as well as the creation of new ones.

Although analytical capabilities of the ASAS are, at this time, somewhat limited, a significant initiative is underway to demonstrate the system's ability to provide:

1. User-specified data needed for evaluation of potential risks associated with a proposed regulation, change in regulation, procedure, or policy.

2. User-specified data needed for trend analysis of an individual aircraft, various groupings of aircraft, airmen, or air agencies to determine safety impacts.

3. User-specified data needed for statistical analysis of populations and distributions.

DEVELOPMENT DIRECTION

You are requesting 136 positions and $9,783,000 for your Development Direction activity which you indicate provides for the planning, directing, monitoring and coordinating of your research and development program.

Question. What has been the most significant accomplishment under this activity during the past year?

Answer. Our most significant accomplishment was the completion of development and certifications of a TCAS II System. This system started flying in commercial service on a Piedmont aircraft on March 18, 1987.

Question. What is the relationship of system engineering contractor to your development direction staff?

Answer. The Development Direction activity provides for the management of staff support for FAA activities related to the Research, Engieering and Development (R,E&D) programs. Systems Engineering and Integration (SEI) activities on NAS Plan related R,E&D items such as Host, Advanced Automation Systems (AAS) and Next Generation Radar (NEXRAD) systems are complimentary and supportive. SEI is not involved in non-NAS Plan R,E&D efforts such as Aircraft Safety, Medicine, Environment, and the Aircraft Separation Assurance programs. The FAA development direction staff manages all R,E&D programs including both NAS Plan and non-NAS Plan activities.

Question. Would you indicate for the record the amount of this Activity's request that is related to your Technical Center?

Answer. The Development Direction activity will provide 11 positions and $919,000 to the Technical Center.

TECHNICAL CENTER

On page EX-17 the total costs associated with your Technical Center are estimated to be about $126 million in Fiscal Year 1988.

Question. What were the two or three most significant accomplishments of this facility during the past year?

Answer. The Technical Center played a major role in the development and testing of the TCAS II units both for the current Piedmont System and for the Limited Installation Program (LIP) Avionics Systems.

An advanced prototype thermal neutron activated explosives detection system was developed and tested during 1987 and will be used for operational tests at airports during 1988.

Final Technical Center testing and approval of the Host System including the en route software and support to operational tests at each of the en route centers was conducted in 1987.

Question. What is the reason for your proposed decrease of two positions (p.129)?

Answer. This is the second phase of a reduction that was presented to the Committee last year when we proposed a reduction of two FTE to reflect savings in conjunction with management initiatives. The two position reduction we are requesting in Fiscal Year 1988 reflects the fiscal year 1987 FTF reduction. Although the reduction is proposed in our Development Direction activity, it will not have an adverse impact on the Technical Center.

ADMINISTRATION OF AIRPORTS PROGRAM

Question. You are requesting 434 positions and $30,057,000 for administration of your Airports program. This is a reduction of 38 positions from the Fiscal Year 1987. You indicate that this reduction is associated with the changes in the Grant Program which are included in your reauthorization bill. If these changes are not enacted, will you need to retain these 38 positions?

Answer. The 38-position reduction is a general estimate of the possible impact on the staffing requirements for the Airports program based on the Administration's post-1987 airport grants legislative proposal which assumes a reduced level of Federal involvement in the program management. The Airports grants reauthorization legislative process was recently begun by the Congress and until it is finalized, the staffing impact will be uncertain. Even if the partial defederalization of airports and state block grant provisions are incorporated into the successor airports grants legislation, there would be no actual reduction in overall workload for the Airports programs in Fiscal Year 1988 and therefore retention of the 38 positions would be essential to program administration.

Question. If the size of the discretionary grant program is increased, won't this increase your administrative workload?

Answer. An increase in the size of the annual discretionary allocation proposed for the airport grants program under the Administration's post1987 legislative proposal could generate additional workload and related program management costs. The process for the distribution of discretionary funds involves additional administrative burden such as the need to prioritize projects for safety and capacity and selecting grant recipients among the many competing eligible projects. This level of review is generally not required for grants issued with entitlement funds. Whether there will be increased administrative costs for the grants program will depend upon the program funding levels and formula allocations in any enacted legislation as well as the impact from the proposed airport defederalization and state block grant provisions.

Question. Last year it was indicated that you planned to complete a staffing standards study for your Airports programs in July 1986. Was this study completed on schedule? If so, what were the results and, if not, what has caused the delay and when do you expect it will be completed?

Answer. The staffing standards study was completed in February 1987. Due to the complexity of developing some of the standards, the initial target date for completion was exceeded.

The study produced a set of validated staffing standards which will be used to develop and analyze Airports program regional staffing resources and requests. Preliminary application of the standards utilizing Fiscal Years 1985 and 1986 workload data indicate extensive staffing deficiencies exist in the field offices. We are now in the process of reviewing and validating the workload data for the two fiscal years in order to determine that there is a uniform understanding and application of the standards. The standards are expected to be the prime source for establishing the Fiscal Year 1989 field staffing requirements.

ENGINEERING/SAFETY STANDARD

Question. Would you also insert in the record a summary of the Engineering and Safety Standards promulgated during the past year?

Answer. The following engineering and safety standards or revisions to standards were promulgated during the past year.

- Specifications for abrasive materials for use on airport operational surfaces to improve aircraft traction and braking performance (AC 150/5200-23A).
- Rescinding of obsolete obstacle critical areas for CAT II and III operations (AC 150/5200-2D).
- Revision of painting, marking and lighting standards for airport vehicles servicing aircraft operational areas (AC 150/5210-5B).
- Airport fire and rescue personnel protective clothing standards (AC 150/5210-4).
- Air-to-ground radio controls for airport lighting systems (AC 150/5340-27A).
- Change to the minimum standards for aircraft fuel storage, handling, and dispensing on airports (AC 150/5230-4).
- Automated Weather Observing Systems (AWOS) for non-Federal applications (AC 150/5220-16).
- Modification to Standard P-209, Crushed Aggregate Base Course Specification.
- Standards for the measurement, construction, and maintenance of skid resistant airport pavement surfaces (AC 150/5320-12A).
- Change to the standardized method of reporting airport pavement strength (AC 150/5335-5).

AIRPORT CAPACITY

Question. On page 135 you are requesting an increase of $1.8 million to support your airport capacity enhancement efforts. Last year you requested an increase of $1.25 million to support your Airport Capacity Program Office. How are you using these funds and why do you believe another increase is required for Fiscal Year 1988?

Answer. In the past year we have used our capacity designated funds to:

- Support contract data collection as part of Airport Capacity Task Forces.

- Contract for assistance in publishing the Airport Capacity Enhancement Plan.
- To begin implementation of the use of airport capacity models to identify needed capacity improvements and other capacity related studies.

The use of computer modeling techniques can be one of the most productive methods of identifying capacity enhancements. We wish to expand their use, such as in assisting Air Traffic in the expansion of the Northern Tier of the East Coast Plan and the West Coast Plan. These models are expensive in that they require much data collection which must be done under contract. We also wish to expand our task force capability.

CONTRACTUAL SUPPORT

Question. Your requests for increased contractual support are more than twice as much as you save from your personnel reductions. To what extent are you substituting contractual support for in-house personnel and what future year costs are associated with the five contract items listed on those pages?

Answer. We are not substituting contract support for in-house personnel. Our workload has been increasing and we are using contract funds to improve productivity to accommodate that increase in some areas such as automation. We are also using direct contract support to handle new workload such as the capacity enhancement efforts and contract for airport safety data collection.

In future years there will be increased automation costs for revisions, operations and maintenance to operating computer systems, probably increased costs to expand capacity enhancement efforts, and in the standards area we would project a need for increased funding to revise airport safety standards.

DIRECTION, STAFF AND SUPPORTING SERVICES

Question. You are requesting 893 positions and $77,488,000 for direction, staff and support services. Would you provide for the record a breakdown of your requested 893 positions and also show how this number compares with the 1,200 position breakdown for fiscal year 1987?

Answer. Following is a breakdown of the Direction, Staff and Supporting Services positions.

Subactivity	1987 Column of 1988 Budget	1988 Column of 1988 Budget
Direction and Management	85	85
Communications Control	49	49
Accounting	333	333
Budget	77	77
Civil Rights	40	40
International Aviation	12	12
Legal	86	98
Management Systems	93	93
Data Systems	184	184
Public Affairs	30	30
Aviation Policy and Plans	13	13
Management Systems 1/		4
Subtotal, Direction, Staff and Supporting Services	1,002	1,018
Undistributed A-76 Cut		-125
Total, Direction Staff and Supporting Services		893

1/ These positions manage the national A-76 management initiative program.

Question: You are requesting (p. 140) an increase of 12 legal positions and you state that you currently have 4,500 pending cases. What is the nature of most of these cases and why have regional caseloads increased 20 to 60 percent in one year?

Answer: The 4,500 pending cases are enforcement cases in which we are seeking civil penalties or certificate actions against air carriers based on violations of the Federal Aviation Regulations. Between 1985 and 1986 there was a 40 percent overall increase in our enforcement caseload, as a result of greater emphasis on enforcement through our National Inspection Program, more routine air carrier inspections, and increased number of aviation inspectors.

CONTROLLER TRAINING

You are requesting 1,209 positions and $228,075,00 for human resource management.

Question. Would you reconcile the 5,486 initial air traffic qualification enrollments included in your justification with the statement that you plan to hire 2,970 controller work force personnel during fiscal year 1987 to meet your minimum goal of 15,000 controllers?

Answer. Two thousand nine hundred seventy (2,970) new controllers will enter the initial qualification screen training program. Of the 2,970, 1,800 (approximately 60%) will enter placement. Approximately 716 of the placement graduates will complete terminal tower cab training before reporting to an air traffic control facility.

Question. Why are your estimated students weeks of training for controllers estimated to decrease in fiscal year 1988 when your enrollments are increasing by nearly 2,000?

Answer. The enrollment and student week exhibit is incorrect. Air traffic enrollments and student weeks for FY 1987 are: 8,237 enrollments and 35,478 student weeks. For FY 1988 they are: 10,113 enrollments and 45,603 student weeks.

Question. What is your current training capacity at the Academy?

Answer. With the current instructor work force, initial qualification training capacity is 2,970 controllers.

Question: What are your current controller class sizes and are you currently operating or will you have to operate more that one shift per day?

Answer: Controller class size for theory training is 18 students. In hands-on-equipment air traffic control, there are nine students per laboratory and one instructor for each student. We are currently operating on two shifts per day.

Inspector Training

Question: You are proposing significant increases in Airway Facilities and Aviation Standards training. How much of this training is conducted at your Academy and to what extent are you using contractor personnel to perform this training?

Answer: . AF - 50% Academy conducted, 19% out-of-agency (some at Academy by contractor), 31% is CBI, of which about half requires hands-on-equipment training at the Academy or a field location. AVS - 40% Academy conducted, 30% TSI conducted, and 30% out-of-agency (half of this is flight training).

Question: If you are using contractor personnel, what portion of them are former FAA employees?

Answer: AF -Academy will have for FY-87 the equivalent of five FTE's in contract instructional services. Eighteen more will be added in FY-88. With a few exceptions, these are former FAA employees. New equipment contractors usually have 25 to 40 contract instructors at the Academy at any given time. AVS-Academy has an instructional services contract for up to 17 instructors on an as-needed basis. For FY-88 an additional two or three contract instructors will be added. Fourteen of the 17 contract staff are former FAA employees.

CONTRACTOR SUPPORT

On page 150 under items A, B, and D you are requesting increases of nearly $7.5 million for additional contractor support.

Question. Would you expand for the record on the need for these funds and explain why their services can not be performed by in-house personnel?

Answer. These increases reflect requirements for:

A. Additional airway facilities new equipment training for which Academy staff is not available.

B. Additional flight training requirements for new aviation safety inspectors which is available commercially and not cost effective to provide in-house.

C. An offset to Academy instructor FTE reductions with no accompanying reduction in training workload.

HEADQUARTERS ADMINISTRATION

Question: You are requesting $38,113,000 and 510 positions for headquarters administration. This is an increase of three positions, which you indicate is related to the increased number of court cases resulting from enforcement actions. How many enforcement related court cases did you have in fiscal year 1986 and what are your estimates for fiscal years 1987 and 1988?

Answer: In 1986 there were 17 enforcement cases before the Court of Appeals. We estimate 32 appellate cases in 1987 and 50 in 1988. In addition to our appellate court caseload, the Office of Chief Counsel also handled an increased number of appeals to the full National Transportation Safety Board (NTSB). In 1985 there were 82 appeals to the NTSB. In 1986 the number of NTSB appeals increased to 225. Our estimate for NTSB appeals in 1987 is 250 and 275 in 1988.

Question: You also indicate (p. 10) that your aircraft accident litigation has increased. Last year it was indicated that you had claims pending against the government amounting to over $15 billion. How many claims are currently pending and for what amounts?

Answer: With respect to our claims and litigation dockets, we are currently in the process of converting to a new computerized docket system. Therefore, the requested information must be hand researched and, to a large extent, our response must be based upon estimates or projections. We estimate that we have over 900 claims pending adjudication, with the total amount demanded being approximately $17 billion. The Aeromexico accident alone (August 31, 1986 at Cerritos, California) has resulted in 149 claims totalling over $750 million. This figure is separate from the over 400 cases we have in litigation in which the total demand exceeds $27 billion.

HEADQUARTERS STAFFING PATTERN

Question. Would you provide for the record a breakdown, by office, of your fiscal year 1987 and 1988 positions, your current employment and estimated end-of-year employment for fiscal years 1987 and 1988?

Answer.

HEADQUARTERS ADMINISTRATION APPROPRIATION--FTP DIRECT POSITIONS BY SUBACTIVITY

	Fiscal Year--	
	1987	1988
Subactivity:		
Direction and management	68	68
Communications control	25	25
Accounting	66	66
Budget	46	46
Civil rights	13	13
Human resources	5	5
International aviation	21	21
Legal	81	84
Management systems	56	56
Data systems	43	43
Public affairs	29	29
Aviation policy and plans	54	54
Total, headquarters administration	507	510

DEFAULTS

Question. How many defaults have you had to date under your aircraft purchase loan guarantee program and what is the total amount you have paid as a result of these defaults?

Answer. To date 9 airlines have defaulted on 18 loans. FAA has paid $171 million as a result of these defaults.

Question. How much has the government recovered in these situation, i.e., defaulted loans?

Answer. The government has recovered $122 million, or 71 percent of costs thus far and expects additional recovery on most defaults

Question. What is your responsibility with respect to disposing of the aircraft when a loan is defaulted?

Answer. The FAA's primary responsibility with respect to the collateral is to dispose of it in a manner which maximizes recovery of costs the FAA incurs in the settlement of loans. The FAA has the option of selling the collateral, or transferring the aircraft to a government agency for its use. The collateral may be sold by the federal government, the loan trustee as agent for the federal government, or by an aircraft broker as agent for the federal government. When collateral is sold by the federal government or by the trustee as agent for the federal government, the following procedures are used to assure the sale is accomplished in a commercially reasonable manner:

1) Advertise the sale in general business and trade publications
2) Give legal notice of the sale to the defaulting carrier
3) Have an independent appraisal made of the collateral
4) Accept bids for a reasonable period of time
5) Negotiate with bidders to maximize the price received

If the collateral is transferred to a government agency, the FAA must give legal notice to the defaulting airline and other creditors and follow procedures of the General Services Administration for interagency transfer of surplus property.

BORROWING AUTHORITY

Question. Why do you need an additional $75 million of borrowing authority in fiscal year 1988, particularly since your estimated contingent liability at the end of 1988 is about $147 million?

Answer. It is impossible to forecast in advance how much borrowing authority will be required for the loan guarantee program in a given fiscal year at the time when budget requests are formulated. In the past, settlement costs varied from a high of over $100 million to under $10 million. If insufficient funds are available to cover settlements, the Government's liability for interest would keep mounting during the time required to request and receive additional borrowing authority or a supplemental appropriation. Therefore, we request sufficient borrowing authority to be covered for the worst possible combination of defaults.

AVIATION INSURANCE REVOLVING FUND

Question. What is the present balance in Aviation Insurance Revolving Fund?

Answer. $37,690,000

Question. Do you have any claims pending?

Answer. No

Question. What is the contingent liability under this program?

Answer Approximately $162,000,000,000

GRANTS-IN-AID FOR AIRPORTS

Question. You are proposing an obligation limitation of $1.017 billion for fiscal year 1988. Last year it was indicated that your study of the economic impact of airports was in the final review process. Would you briefly summarize the conclusions of this review and provide a more detailed summary for the record?

Answer. The study conducted by the FAA and the Department of Transportation's Transportation Systems Center has been completed.

It revealed a strong relationship between airport activity and the economy of the surrounding area. A typical small general aviation airport may provide residents of the surrounding area with savings of almost $200,000 annually in reduced travel costs and time savings. It would also generate employment for about 5 people, with an estimated annual payroll of $115,000.

A larger airport with 100 based aircraft and one million commercial passengers annually would typically save users over $16 million annually in reduced costs over the next best alternative mode of travel, and would generate almost 1,500 jobs with an annual payroll of over $32 million.

Hub airports have a much larger impact. The New York area represents an extreme situation, where aviation generated $18.9 billion in economic activity and sales in 1984.

As a result of the study, FAA has issued a report, "Measuring the Regional Economic Significance of Airports." The report is intended for use by airport operators, planners, and public officials. It provides advice on how to measure the importance of an airport to the economy of the surrounding area. It defines various measures of economic significance, describes the circumstances in which they are applicable, and provides guidelines for their initial approximation and subsequent computation.

Question. For example, who are the major beneficiaries of these projects?

Answer. The benefits of airports are widely distributed. The primary beneficiaries of transportation benefits are air travellers, who save time and money by using convenient and efficient airports. Since half of all air travel is for business purposes, business and industry share heavily in these benefits.

Economic impact is greatest for people who are directly employed on airports by airlines, fixed-base operators, and airport management, or those who are employed in transportation related fields such as hotels, travel agencies, or freight forwarders. The spending of these employees stimulates the economy and creates additional jobs in service industries. As a rule of thumb, for every job attributable to an airport there is a second job induced in the regional economy.

Economic impact analysis highlights the fact that the entire Nation receives benefits from a safe and efficient airport system.

PENDING APPLICATIONS

Question. As you indicated, you are requesting a $1.017 billion obligation ceiling for FY 1988. How much have you obligated to date during fiscal year 1987 and what dollar amount of applications do you have pending?

Answer. We have obligated through April 30, 1987, $284.7 million. Pending application dollar amount is $3,804.5 billion.

Question. Would you provide a breakdown of your pending applications by airport category

Answer. The information is listed.

Primary/Commercial Service	767	$2,340.2
General Aviation/Reliever	1,270	1,464.3
Total	2,037	$3,804.5

Question. Would you indicate for the record the actions taken with regard to the airports identified on page 35 of Senate Report 99-423 accompanying the fiscal year 1987 Transportation Appropriations Bill?

Answer. The information is attached.

Question. What actions have you taken with respect to the Philadelphia International Airport.

Answer. Philadelphia International Airport received the following funds in fiscal year 1986 and fiscal year 1987.

Fiscal Year	Project No.	Funds	Work
1986	09	$1,280,627	Construct access road (Phase 2)
	10	5,359,674	Construct apron (Phase 1)
	11	1,000,000	Construct apron (Phase 2)
1987	12	1,590,437	Construct apron and service road

Additional projects are under consideration for funding in fiscal year 1987 pending on-going sponsor/FAA discussions.

ILS

Question. In fiscal year 1987, the Committee Report concurred with House Report directing you to allocate up to $5 million from the airport grant program for the purchase or lease of Instrument Landing Systems and approach lighting. Have any funds been made available for this program? If so, how much and to whom, and if not, why not?

Answer. The Administrator has just recently issued the revised FAA policy on MLS and ILS and our Regional Airports Offices are now formally accepting applications from sponsors wishing to install an ILS under the Airport Improvement Program. We expect to allcoate the entire $5 million by the end of this fiscal year. The locations to receive an ILS will be selected from among the applicant based or national priority needs. The selection process is scheduled to be completed by July 31, 1987.

Question. Would you provide for the record a listing of your pending appplications for safety and security projects?

Answer. The information is attached.

STATUS OF NAMED LOCATIONS

SENATE COMMITTEE ON APPROPRIATIONS REPORT FOR FY 1987 APPROPRIATIONS

LOCATION AIRPORT NAME TYPE	REQUESTED	PLANNED OR PROGRAMMED	REMARKS
ARKANSAS			
Magnolia Magnolia Municipal (GENERAL AVIATION)	Remove obstructions; expand apron; construct runway turnaround - $663,169.	Acquire land for development and approaches; install visual aids - $80,000; extend runway and lighting - $389,300.	Remaining work will be considered as additional funds become available.
Melbourne New Airport (GENERAL AVIATION)	No request on file.	Nothing presently planned for FY 1987.	Earlier request returned in FY 1986 due to lack of Federal funds through FY 1987 end of current program. Development will be considered as funds and priorities allow if an updated request is filed.
Mountain Home Baxter County Regional (COMMERCIAL SERVICE)	No request on file.	Nothing presently planned for FY 1987.	Two FY 1986 projects, which were approved for $1.8 million, are currently underway.
FLORIDA			
Miami Miami International (PRIMARY)	Reconstruct runway - $1,000,000; modify terminal building - $4,940,250; moving sidewalks - $2,625,000; improve aprons - $2,750,000.	Reconstruct runway - $1,000,000; modify terminal building - $704,149.	Remaining development will be considered as additional funds become available.
Orlando Orlando International (PRIMARY)	Site preparation for third runway - $8,062,500; crossfield taxiway bridges - $2,250,000; pave third runway and taxiway - $21,300,000; crash/fire/rescue building - $1,875,000; acquire land - $3,000,000.	Site preparation for third runway - $4,695,311.	Remaining development will be considered as additional funds become available.

LOCATION AIRPORT NAME TYPE	REQUESTED	PLANNED OR PROGRAMMED	REMARKS
Tampa Tampa International (PRIMARY)	Reconstruct runway - $1,564,000; update master plan - $366,000; construct and reconstruct taxiways - $5,077,250; pave apron - $3,678,930; taxiway and apron lighting - $331,500; extend service road - $651,750; improve drainage - $1,500,000; groove runway - $76,000; construct people mover - $581,500.	Reconstruct runway - $1,073,926; update master plan - $325,000.	Remaining development will be considered as additional funds become available.
IOWA			
Cherokee Cherokee Municipal (GENERAL AVIATION)	Relocate road; extend runway and taxiway; expand apron; install VASI and fencing - $1,788,116.	Nothing presently planned for FY 1987.	Development will be considered as additional funds become available.
Keokuk Keokuk Municipal (GENERAL AVIATION)	Land for development and clear zones; construct and light runway and taxiway - $4,061,700.	Land for development and clear zones - $265,000.	Remaining development will be considered as additional funds become available.
Perry Perry Municipal (GENERAL AVIATION)	Land for development and approaches; pave, extend and light runway; expand apron; pave access road; install VASI and REIL - $1,156,590.	Nothing presently planned for FY 1987.	Development will be considered as additional funds become available.
MARYLAND			
Baltimore Baltimore-Washington (PRIMARY)	FY 87 portion of prior multi-year grant for noise compatibility and relocation assistance - $3,596,091; rehabilitate runway 4/22 - $1,488,750; extend taxiways - $3,545,250; expand apron - $5,023,500; construct taxiways -	FY 87 portion of prior multi-year grant for noise compatibility and relocation assistance - $3,596,091; rehabilitate runway 4/22 - $1,488,750; extend taxiways - $3,545,250; expand apron - $5,023,500;	Remaining development will be considered as additional funds become available.

LOCATION AIRPORT NAME TYPE	REQUESTED	PLANNED OR PROGRAMMED	REMARKS
Baltimore (cont'd)	$2,487,000; noise compatibility plan study - $150,000; rehabilitate runway lighting - $975,000; rehabilitate runway 10/28 - $3,975,000; land for approaches - $2,925,000; expand apron - $1,712,250; extend runway 15L/33R - $3,297,000; rehabilitate holding bays - $569,250.	Construct taxiways - $2,487,000; noise compatibility plan study - $150,000. rehabilitate runway lighting - $975,000; rehabilitate runway 10/28 - $3,975,000.	Remaining development will be considered as additional funds become available.
NEW MEXICO			
Taos Taos Municipal (GENERAL AVIATION)	Construct runway and parallel taxiway - $6,641,100; construct taxiway - $625,500; install lighting and fencing - $418,500.	See Remarks.	Before any construction can be started, an airport master plan study, now underway, must be completed. The study, including an environmental assessment, is not expected until FY 1988.
NEW YORK			
Binghamton Link Field - Broome County (PRIMARY)	Extend runway - $18,423,000.	Nothing presently planned for FY 1987.	Development will be considered as additional funds become available.
Johnstown Fulton County (GENERAL AVIATION)	Extend runway, land for development and approaches - $620,000.	Extend runway, land for development and approaches - $620,000.	All outstanding requests satisfied.

LOCATION AIRPORT NAME TYPE	REQUESTED	PLANNED OR PROGRAMMED	REMARKS
NORTH DAKOTA			
Bismarck Bismarck Municipal (PRIMARY)	Construct aprons - $395,829; construct and light taxiway - $590,390.	Construct aprons - $395,829.	Remaining development will be considered as additional funds become available.
Casselton Casselton Regional (GENERAL AVIATION)	Construct runway, taxiway and apron; install runway lighting and visual aids; land for runway approaches - $762,770.	Construct runway, taxiway and apron; install runway lighting and visual aids; land for approaches - $762,770.	All outstanding requests satisfied.
Fargo Hector Field (PRIMARY)	Replace runway lighting - $135,000; construct snow removal equipment storage building - $1,049,586; construct taxiway and apron - $2,000,000.	Replace runway lighting - $135,000; construct snow removal equipment storage building - $1,049,586.	Remaining development will be considered as additional funds become available.
Grand Forks Grand Forks International (PRIMARY)	Expand and light apron - $429,209; extend runway and taxiway - $250,000.	Expand and light apron - $429,209.	Remaining development will be considered as additional funds become available.
Harvey Harvey Municipal (GENERAL AVIATION)	Pave and light runway and taxiway; pave apron and access road; overlay taxiway; install visual approach aids; install fencing - $541,979.	Pave and light runway and taxiway; pave apron and access road; overlay taxiway; install visual approach aids - $541,979.	All outstanding requests satisfied.
Jamestown Jamestown Municipal (COMMERCIAL SERVICE)	Rehabilitate runway and taxiways; install/replace apron and access road lighting - $176,726; seal coat runway, rehabilitate apron - $150,422.	Rehabilitate runway and taxiways; install/replace apron and access road lighting - $176,726.	Remaining development will be considered as additional funds become available.

LOCATION AIRPORT NAME TYPE	REQUESTED	PLANNED OR PROGRAMMED	REMARKS
Minot Minot International (PRIMARY)	Expand apron, expand and remodel terminal building; extend access road - $840,582.	Nothing presently planned for FY 1987.	Sponsor has decided to defer the project until a future year.
OKLAHOMA			
Fairview Fairview Municipal (GENERAL AVIATION)	Strengthen runway; land for development and approach; install runway lighting; strengthen taxiway and apron; extend runway and lighting; construct taxiway; extend taxiway; install taxiway lighting and a visual approach aid - $1,869,993.	Nothing presently planned for FY 1987.	Development will be considered as additional funds become available.
OREGON			
Eugene Mahlon Sweet (PRIMARY)	Expand terminal building and apron; construct access road and drainage; improve safety area; relocate lighting controls; replace proximity suits - $2,531,839.	Expand terminal building and apron; construct access road; improve safety area - $1,903,973.	Remaining development will be considered as additional funds become available.
PENNSYLVANIA			
Philadelphia Philadelphia International (PRIMARY)	FY 87 portion of prior multi-year grant for terminal apron construction - $3,409,963; snow removal equipment - $300,000; construct international terminal apron (Phase II) - $7,200,540; construct mid-field commuter apron - $3,400,500; planning and engineering to construct taxiways - $600,000; construct cargo apron (Phase I) - $4,200,300; (Phases II and III) - $4,700,000.	FY 87 portion of prior multi-year grant for terminal apron construction - $3,409,963.	Remaining development will be considered as additional funds become available.

LOCATION AIRPORT NAME TYPE	REQUESTED	PLANNED OR PROGRAMMED	REMARKS
Philadelphia Northeast Philadelphia (GENERAL AVIATION)	Construct apron - $2,880,000.	Nothing presently planned for FY 1987.	Development will be considered as additional funds become available.
Pittsburgh Greater Pittsburgh International (PRIMARY)	FY 87 portion of prior multi-year grant for midfield terminal apron - $3,501,182; construct midfield terminal apron (Phase II) - $12,000,000; noise compatibility plan study, soundproof residences - $800,000; rehabilitate runway - $4,800,000.	FY 87 portion of prior year multi-grant for midfield apron - $3,501,182.	Remaining development will be considered as additional funds become available.
VIRGINIA			
Roanoke Roanoke Municipal/ Woodrum Field (PRIMARY)	Construct terminal building and related terminal area development - $6,827,389.	Construct terminal building and related terminal area development (Phase II) - $1,198,733.	Remaining development will be considered as additional funds become available.
WISCONSIN			
Racine Racine Commercial (RELIEVER)	Remove obstructions, relocate apron and access road (Phase I) - $300,000; relocate fueling station and fencing, construct apron and access road - $226,500.	Remove obstructions, relocate apron and access road (Phase I) - $300,000.	Remaining development will be considered as additional funds become available.
Waukesha Waukesha County (RELIEVER)	Reconstruct runway, install runway and taxiway lighting - $631,800; remove obstruction, extend runway and taxiway, install instrument approach aids, relocate public road and install fencing - $1,493,100.	Reconstruct runway, install runway and taxiway lighting - $631,800.	Remaining development will be considered as additional funds become available.

PENDING SAFETY AND SECURITY APPLICATIONS

AIP Requests including Work Priority A
(Priority A items are underlined)

Airport City State	Federal Funds Requested	Work Description (Remarks)
Fairbanks Int'l. Fairbanks Alaska	$ 562,500	Crash/fire/rescue vehicles.
Ketchikan Int'l. Ketchikan Alaska	2,250,000	Porous friction course runway; overlay taxiway.
St. Paul St. Paul Alaska	2,270,125	Crash/fire/rescue equipment; crash/fire/rescue building; land.
Wrangell Wrangell Alaska	398,754	Groove runway; install sign.
Redding Municipal Redding California	343,800	Expand crash/fire/rescue building including access road improvements.
Redding Municipal Redding California	2,700,574	Extend runway including porous friction course, taxiway extension and lighting; install VASI.
SW Florida Reg. Ft. Myers Florida	238,000	Crash/fire/rescue equipment.
Jacksonville Int'l. Jacksonville Florida	632,500	Crash/fire/rescue vehicle; replace security fence and gates.
Naples Municipal Naples Florida	50,000	Crash/fire/rescue maintenance building.
Pensacola Regional Pensacola Florida	250,000	Crash/fire/rescue vehicle.
St. Petersburg Clearwater Int'l. St. Petersburg Florida	117,000	Groove runway.
Tallahassee Municipal Tallahassee Florida	41,400	Security fencing.
Tampa Int'l. Tampa Florida	643,000	Crash/fire/rescue vehicle; groove runway; security fencing.
Athens Municipal Athens Georgia	113,500	Crash/fire/rescue building.

Airport City State	Federal Funds Requested	Work Description (Remarks)
Bloomington-Normal Bloomington Illinois	$ 227,700	Crash/fire/rescue vehicle.
Sioux City Municipal Sioux City Iowa	855,000	Crash/fire/rescue building.
Standiford Field Louisville Kentucky	100,000	Crash/fire/rescue vehicle.
Owensboro-Daviess Co. Owensboro Kentucky	54,000	Security fencing.
Missoula County Missoula Montana	549,565	Improve extended runway safety areas.
Wm. B. Heileg Field Scottsbluff Nebraska	516,933	Crash/fire/rescue vehicle; snow blower and snow plow; upgrade runway lighting.
Burke Lakefront Cleveland Ohio	577,920	Crash/fire/rescue building.
Greater Pittsburgh Int'l. Pittsburgh Pennsylvania	225,000	Crash/fire/rescue vehicle.
Greenville-Spartanburg Greer South Carolina	378,000	Refurbish crash/fire/rescue vehicles.
Lowell Field Chattanooga Tennessee	353,700	Crash/fire/rescue vehicle; security fencing.
Grant County Moses Lake Washington	225,000	Crash/fire/rescue equipment.

FACILITIES AND EQUIPMENT

The latest GAO Report (March 1987) indicates that all 11 major system acquisition projects in the NAS Plan are behind schedule. These delays range from 1 - 8 years and average 3.4 years per project when compared to the 1981 NAS Plan schedule. The GAO also says that none of these delays are attributable to inadequate funding. What is, perhaps, most disturbing is that significant NAS Plan delays are experienced in all major programs -- whether they are technically sophisticated like the AAS; or are off-the-shelf technology like MLS or Mode C.

Question. Why have we experienced such significant delays in all NAS Plan projects -- especially when we hired an $800 to $900 million SEI contractor to manage this program?

Answer. At the time of the SEI contract award in January 1984, many NAS Plan projects were already on contract or specifications had already been developed for contracts. Clearly, the SEI contractor had no input to the formulation of these major projects and could only support the execution of the projects as planned by the FAA. The SEI contractor was expected to provide technical expertise to supplement existing technical staffs which were not staffed for the large increase in new procurement. The extent that these major acquisitions have been successful, or unsuccessful, is not attributable to the SEI contractor's actions alone. It is the result of the FAA's and the SEI's actions corporately.

One item which is common to the major programs is contractors who have not delivered as promised. We recognize that as we are developing new systems, unforeseen problems will arise, and to some extent this should be tolerated; however, software development problems have become prevalent in major programs and they have been encountered by high-technology companies that have extensive experience. Nonetheless, we have and are continuing to overcome these development problems jointly with industry and we are succeeding.

Question. Are any NAS Plan projects currently being delayed to inadequate funding?

Answer. There are no NAS Plan projects currently being delayed due to inadequate funding.

NAS PLAN/SAFETY

You are requesting $1.35 billion for facilities and equipment in Fiscal Year 1988.

Question. Will this funding level force you to delay any procurements that are necessary from a safety standpoint? If so, what are they and how much do they cost?

Answer. The funding level of $1.35B supports all planned FY 1988 procurements for safety related activities. Included in this request are such safety related items such as:

- 24 Terminal Doppler Weather Radars
- establishment of an ASR at Charlottesville, VA

- procurement of AWOS systems
- initiate the second buy of Microwave Landing Systems
- continue the implementation of the Approach Lighting System System Improvement Program
- establishment of RVR's
- improvement of various airport landing aids

A reduced level of funding could impact the FAA's ability to support all of the above procurements.

F&E/FULL FUNDING

Question. Please provide for the record a breakdown of the projects (and amounts) in your Fiscal Year 1988 request that can be taken off the full funding concept in a way that will not add to the total cost of the project.

Answer. On a selective basis there may be a few projects requested in Fiscal Year 1988 that could be taken off "full funding" without impacting schedule or costs. However, all projects requested are priced on a fully funded basis. The full funding concept makes good sense. GAO has agreed that the full funding concept improves management, minimizes construction delays, facilitates better budget estimates, and provides cost savings.

DEMONSTRATION GRANTS

Question. On page 1, you propose eliminating the bill language pertaining to demonstration grants to establish Airway Science Programs. How effective has this program been, and why do you propose ending this program?

Answer. The FAA does not propose ending the Airway Science Grant Program. To date all appropriated grant funds have been initiated by Congress, accounting for $34 million in total funding. These funds have been obligated to 14 different institutions, contributing to the quality of education available to aviation students. These students will be hired by the FAA as well as the aviation industry and will be the future workforce in direct support of the National Airspace System. Each year as more grant funds contribute to the acquisition of educational facilities and equipment in support of the Airway Science Program, more students become involved in the program. In addition, there is a direct correlation between available grant funds and applications for curriculum approval. To date, 30 institutions have achieved curriculum recognition, and another 26 are in the process of achieving recognition.

Question. Please provide for the record a status report on the program, including funds designed for Barry University, showing funds appropriated by fiscal year, funds obligated to date, what institutions have received funds for what purposes, pending applications, and a timetable for future grant awards.

Answer. All appropriated funds through FY-86 have been awarded. FY-87 appropriated funds of $5,000,000 will be distributed to Congressionally designated institutions. All grant awards to date are listed in the following chart. FY-87 appropriated competitive funds of $5,000,000 were announced by publication in the Federal Register on February 2, 1987, with an application deadline of May 29, 1987. To be eligible to compete for funding an institution must have an established FAA recognized Airway Science Curriculum in place and available to students. The curriculum must have been recognized by the FAA Administrator no later than December 31, 1986. The FAA has received 19 grant applications requesting a total of $14.8 million in project funding. The FAA expects to announce grant awards by September 30, 1987.

AIRWAY SCIENCE GRANTS

Fiscal Year	Institution	Grant Status	Appropriation	Obligated	Purpose
82	University of North Dakota*	Awarded	$4,000,000	$4,000,000	facilities/ equipment
83	University of North Dakota*	Awarded	2,750,000	2,750,000	facilities/ equipment
83	Hampton University	Awarded	2,250,000	2,250,000	facilities/ equipment
85	University of North Dakota*	Awarded	1,000,000	1,000,000	equipment
85	Florida Memorial College*	Awarded	1,000,000	1,000,000	facilities
85	Tennessee State University	Conditional upon recognition of AWS curriculum/final grant plan to be submitted by institution	800,000	-	facilities/ equipment
85	Embry-Riddle Aeronautical University	Awarded	500,000	500,000	facilities
85	National University	Grant Agreement submitted to institution for signature	500,000	-	facilities/ equipment
85	Middle Tennessee State University	Awarded	871,044	871,044	facilities/ equipment
85	Purdue University	Awarded	128,956	128,956	equipment
85/86	Texas Southern University	Conditional upon recognition of AWS curriculum/final grant plan to be submitted by institution	200,000 31,168**	-	facilities/ equipment
86	University of North Dakota*	Awarded	3,828,000**	3,828,000	facilities/ equipment
86	Delta State University*	Awarded	2,201,100**	2,201,100	facilities/ equipment
86	Florida Memorial College*	Awarded	2,871,000**	2,871,000	facilities/ equipment

86	California State University	Conditional upon recognition of AWS curriculum/final grant plan to be submitted by institution	$ 48,082**	-	equipment
86	Elizabeth City State University	Awarded	144,050**	144,050	equipment
86	Dowling College	Awarded	223,300**	223,300	facilities/ equipment
86	Ohio State University	Final grant plan to be submitted by institution	223,300**	-	facilities/ equipment
87	University of North Dakota*	Awarded	3,000,000	3,000,000	facilities/ equipment
87	Florida Memorial College*	Grant plan to be submitted by institution	2,000,000		
87		Competitive grant plans to be submitted by May 29, 1987	5,000,000		
			$33,570,000	$24,767,450	

OTHER EDUCATIONAL GRANTS

87	Barry University*	Awarded	3,914,000	3,914,000	facilities/ equipment
	Total		$37,484,000	$28,681,450	

*Congressionally designated awards
**Award includes 4.3% GRH reduction

RENTAL PAYMENTS

Question. Please explain the 44 percent reduction in rental payments -- from $15.805 million in fiscal year 1987 to $8.776 million in fiscal year 1988.

Answer. The "rental payments to others" in FY 1987 included payments for the Aeronautical Center for the first time from the F&E appropriation. The rental payment for the Management Training School was transferred to this appropriation, for FY 1987 only, as part of the Aeronautical Center lease thus causing a large increase between the FY 1986 and FY 1987 payments, from $8.521 million to $15,805 million. In FY 1988 payment for the Aeronautical Center lease was entered under the 23.3 object class, "communications, utilities, and other rent" and actually should be coded as 23.2--"rental payments to other." The correct estimated obligation for FY 1988 is $13.486.

Question. Why are these payments decreasing significantly when GSA has imposed a major rate increase?

Answer. The "rental payments to others" in FY 1987 included payments for the Aeronautical Center for the first time from the F&E appropriation. The rental payment for the Management Training School was transferred to this appropriation, for FY 1987 only, as part of the Aeronautical Center lease thus causing a large increase between the FY 1986 and FY 1987 payments, from $8.521 million to $15,805 million. In FY 1988 payment for the Aeronautical Center lease was entered under the 23.3 object class, "communications, utilities, and other rent" and actually should be coded as 23.2--"rental payments to other." The correct estimated obligation for FY 1988 is $13.486 million.

Communications, Utilities, & Rent

Question: Please also explain the massive increase in "communications, utilities, and other rent" over two years -- from $544,000 in fiscal year 1986 to $12.961 million in fiscal year 1988 (p. 5).

Answer: The FY 1986 figure of $544,000 is understated by $7,822,000 (for penalty mail) which was obligated under the 25.0 object class, "other services". The correct figure for FY 1986 is $8,366,000. The increase to $12,339,000 in FY 1987 includes a one time transfer of utility costs for the Aeronautical Center and miscellaneous facilities. The FY 1988 figure for this object class is overstated by the amount of the Aeronautical Center lease ($4,710,000) which should properly have been shown under object class 23.2 "rental payments to others" (non-GSA rents). Therefore, the correct obligations for "communications, utilities, and other rent" (p.5) would be: FY 1986 - $8,366,000; FY 1987 - $12,339,000; FY 1988 - $8,251,000.

F&E Staffing

Question. Why are you proposing major increases for "other than full-time permanent" personnel? These costs increase by over 1,000 percent over two years -- from $371,000 to $4.394 million.

Answer. The temporary increase in full time equivalent (FTE) employment will not only allow us to maintain the NAS Plan implementation schedule in anticipation of the technical support services contract (TSSC), but also provides a vehicle for hiring and training new engineers and technicians. Once the TSSC is in place, this cadre of specialists will represent a pool of qualified potential employees who could be absorbed into the permanent installation and maintenance workforce as vacancies occur through attrition.

Question: These costs increase by over 1,000 percent over two years—from $371,000 to 4.394 million. Why aren't you hiring more permanent people if your personnel needs are growing by such a large extent?

ANSWER: Until the Technical Support Services Contract (TSSC) is awarded in fiscal year 1988 and the contractor is up to speed in executing the contract, approximately 175 workyears of temporary

Federal employment will be used to perform the work to avoid delays in program implementation. No additional funds are needed to cover these costs because they were included as part of the projects' original budgeted costs.

After the TSSC is awarded and the contractor starts to function, the temporary personnel will be phased out. Many will be able to find permanent work in the systems maintenance workforce funded in the Operations appropriation.

NAS PLAN/UNOBLIGATED BALANCE

You indicated that the projected end-of-year unobligated balance for F&E will start to climb again. You show an 18 percent increase between Fiscal Year 1987 and 1988--from $1.081 billion to $1.279 billion.

Question. Why is your unobligated balance moving up instead of down?

Answer. The F&E obligations levels have been occurring at a faster rate than in previous years. Currently, obligation levels are 3 to 4 times those of just a few years ago. The unobligated balance is moving up only because appropriation levels have increased. Under the F&E full funding concept, only a portion of the new funds are obligated during the first year. The remainder of these funds are then obligated when the equipment is delivered and installed. The unobligated balance will significantly decrease as more of the equipment is installed and as we move toward completion of the NAS Plan.

Question: Please also provide for the record a listing of all projects over $5 million for which funds are reserved yet unobligated and have slipped from the contract award date assumed in the original budget request. Please show the originally planned date, the reason for each slippage, and the dollar of each project.

Answer:

Project: Automated Weather Observing System (AWOS)

Planned Contract Award Date: October 1986 (Limited Production)
August 1987 (Full Production)

Current Plan Contract Award Date: June 1988 (pending approval by Department of Transportation)

Reason: Phase I of this contract (Design Phase) was awarded in October 1984. Contractor difficulties significantly slipped the planned award of the Limited Production Phase and the Full Production Phase. FAA has evaluated alternative acquisition approached, and expects approval from the Department of Transportation of a procurement of commercial off-the-shelf systems.

Dollar Amount: $27.2 million (FY 1986)

FLEET CONVERSION

Question. Please provide a detailed update of the status of your aircraft fleet conversion contract awards including amount, number and type of aircraft, date of award, delivery dates, and contractor.

Answer. An award in the amount of $58.9 million was made in October 1986 to Beech Aircraft Corporation for 19 Beech Model 300 airplanes. Aircraft delivery is scheduled to commence in October 1987 with final delivery planned for December 1988.

LONG RANGE RADAR

On page 22, you are requesting $39 million to procure two long range radar systems. This program has experienced significant delays.

Question. Would you briefly summarize the reason for these delays and explain whether all the technical problems have been worked out? If not, how close are you to resolving these problems?

Answer. Delays to FAA/Air Force Radar Replacement Program were the result of several factors. These were: separate Air Force and FAA cost estimates required reconciliation before final funding profile could be developed, system requirements differences between FAA and USAF delayed the system specification, and changing Air Force operational requirements necessitated restructuring the program from 48 to 40 radars. All technical and funding issues have been resolved.

Question. Please expand on your answer for the record, including a description of technical problems experienced, the progress made in resolving these problems, and a comparison of original versus current unit cost for these radars. If the cost has increased, please explain why.

Answer. Additional time was needed to resolve conflicting cost estimates, analyze availability requirements, and consider operational and budgetary changes requested by the Air Force.

Separate Air Force and FAA cost estimates were resolved by analyzing the different assumptions used to obtain these estimates. The differences were then reconciled with additional discussions. The current average estimated cost for these radars is $17.6 million per unit in escalated dollars. This cost includes radar equipment, installation, check-out, site preparation, spares, training, freight, engineering support, testing, inspection, etc., and is an increase of $1.9 million per unit. The increase is due to reducing the number of systems from 48 to 40, and reconciling the separate cost estimates.

After detailed reliability analyses were conducted, a decision was made to specify an availability of 99.74 percent. This availability meets FAA and Air Force operational requirements and is compatible with an unmanned site.

Additional time was also needed to restructure the program from 48 to 40 radars in order to accommodate Air Force budget limitations.

This restructuring required that program documentation be revised and that new program funding profiles be developed and coordinated.

Question. On what date would you expect to award your first long range radar contract, and how confident are you that you will meet this date?

Answer. Contract award for the FAA/Air Force Radar Replacement program is scheduled for September 1988 and we are confident that this date will be met.

RADAR MICROWAVE LINK

You are requesting $60.5 million to continue to Radar Microwave Link (RML) Program.

Question. Please provide for the record a comparison of your current RML procurement milestones with your projected schedule when the project was initiated.

Answer. The comparison of our current RML procurement milestones with our projected schedule when the project was initiated follows:

Original Projected	
Request for Proposal	03/84
Award first 308 facilities	01/85
Award 200 facilities	02/85
Award 200 facilities	10/85
Award 200 facilities	10/86
Award route switching contract	12/86
Award 92 facilities	10/87
Program completion	06/89

Current Schedule	
Request for proposal	3/84
Awards 308 facilities	FY 85.....5/85
Start 84 facilities	FY 85.....8/86
Start 144 facilities	FY 86.....9/86
Start 80 facilities	FY 87.....9/87
Start 201 facilities	FY 88.....9/88
Start 95 facilities	FY 89.....9/89
Start 88 facilities	FY 90.....9/90
Award route switching contract	FY 90.....3/90
Program Completion	.....6/92

Question. Please also include a detailed explanation for any slippages from the timetable projected last year and your confidence level for meeting your latest timetable.

Answer. Changes from last years timetable are due to the following:

Funding deferrals; additional retrofit work necessary on installed sites to resolve frequency interference problems; and a continued large number of site peculiar irregularities reported in the contractor conducted site surveys.

Our confidence is virtually 100% that we will complete the overall program by 6/92 if no further funding deferrals are made. Although our confidence level to complete the programs by 6/92 is 100%, the actual number of facilities started in any particular fiscal year, is at a 50% - 75% confidence level, based on the reasons stated above.

NEXRAD

You are requesting $36.2 million to continue procurement of the en route NEXRAD weather radar system.

Question. Would you briefly explain the development status of the en route NEXRAD system -- have all the technical problems been resolved at this point?

Answer. Unisys and Raytheon competitive prototype systems are essentially complete (minor upgrades are still required). Initial operational test and evaluation was completed in May. Any remaining operational enhancements required will be incorporated by the selected contractor during the limited production contract.

Question. If not, what remains to be done and when will this system be ready for deployment?

Answer. A limited production contract award is scheduled for July 1987. Initial deployment is scheduled for December 1989.

Question. How confident are you of the date?

Answer. We have high confidence that we will meet these schedules.

To date, $45.7 million has been appropriated for en route NEXRAD (FY 84 - 87).

Question. How much of this amount will be obligated by the end of fiscal year 1987, and for how many sites?

Answer. $37.3 million will have been obligated by the end of FY 1987 for 12 sites. The remaining $8.4 million will be obligated by January 1988 for NEXRAD communications interfaces at air route traffic control facilities and for siting studies at non-CONUS locations.

Question. When will the $36.2 million you are requesting for this program be obligated?

Answer. The $36.2 million will be obligated in FY-1988 for 32 en route NEXRAD units.

Question. Will these funds be used simply to supplement the original contract, or will this procurement be broken up into phases that are competitively bid?

Answer. All NEXRAD units will be procured from a single contractor under one contract, but will be in two phases. The first phase will consist of a limited production buy of 10 units. The second phase will be full production of the remaining NEXRAD units.

Question. Provide for the record a list of the sites for the radar funded by your request.

Answer.

Sites

Goodland, KS
Grand Island, NE
Amarillo, TX
Philadelphia, PA
Charleston, WV
Louisville, KY
Indianapolis, IN
Chicago, IL
Pittsburgh, PA
Detroit, MI
Cleveland, OH
Los Angeles, CA
San Francisco, CA
Little Rock, AR
Jackson, MS
Slidell, LA
Memphis, TN
Buffalo, NY
New York, NY
Albany, NY
Boston, MA
Salt Lake City ,UT
Portland, ME
Omaha, NE
Des Moines, IA
Cheyenne, WY
Sioux Falls, SD
Harrisburg, PA
Bismark, ND
Boise, ID
Minneapolis, MN
Milwaukee, WI

NEXRAD/DELAYS

Question. Are the NEXRAD delays experienced to date attributable in any way to algorithm development and documentation?

Answer. No, the NEXRAD delays are not attributable to algorithm development and documentation. All of the NEXRAD algorithms that were required to be demonstrated in the validation phase were developed, validated and given to Unisys and Raytheon with sufficient time for implementation.

Question. If so, which ones, what is their current status, and when do you expect to have each of these algorithms satisfactorily developed and documented?

Answer. See answer to preceding question.

Question. If wind shear detection algorithms have been a problem, to what extent have NEXRAD delays been attributable to the software needed for the terminal radar applications, i.e., for the interim terminal NEXRAD or the TDWR system?

Answer. The terminal NEXRAD algorithm package is completely separate from the en route effort and has no impact on the en route NEXRAD schedule.

Question. Why couldn't en route and terminal NEXRAD software development be separated to accelerate en route NEXRAD deployment?

Answer. See answer to preceding question.

Question. Also, when will the terminal radar software be fully developed.

Answer. Terminal NEXRAD software will be fully developed and documented by June 1987 and will then undergo an independent validation which should take them 3 to 6 months. The contractors have estimated that it would take 18 months to implement the terminal NEXRAD algorithms. Present plans are to deliver these algorithms to the NEXRAD contractor 26 to 29 months prior to the first delivery of a terminal NEXRAD system.

NEXRAD/A-109

The FAA has been criticized for not following all the A-109 test requirements before buying and deploying NAS plan equipment.

Question. Will the en route NEXRAD be fully tested according to A-109 guidelines before it is purchased?

Answer. En route NEXRAD fully follows the A-109 guidelines. Operational requirements were issued in 1981, and three contractors were awarded the definition study in 1982. A contract was awarded for a prototype system in 1983. A limited production contract will be awarded in July 1987, with the option for full production to be exercised in 1988.

Question. If not, why not; and how confident are you that this system will meet all of your requirements without further cost growth?

Answer. We have a high confidence that the system will meet FAA requirements without further cost growth.

NEXRAD/COST SHARING

The en route NEXRAD program is under a cost-sharing arrangement with the National Weather Service and the Defense Department. You sent a report in March indicating that the cost sharing agreement called for $58.7 million from FAA ($36.2 million en route and $22.5 million terminal); $56.9 million from NOAA, and $30.7 million from DOD in fiscal year 1988.

Question. Are sufficient funds in all three agency budgets to meet the en route NEXRAD procurement schedule assumed in your fiscal year 1988 request?

Answer. Yes. Sufficient funding is in all three agencies' budgets for FY 1988.

The committee understands that FAA's share of NEXRAD's costs ($137.3 million) are spread out over five year (FY 88-92), whereas NOAA and DOD costs are spread out over seven years (FY 88-94).

Question. Why are FAA's costs "front loaded" compared to NOAA and DOD?

Answer. In order to accommodate the FAA terminal NEXRAD program, the FAA NEXRAD unit delivery schedules were moved from the end of the NEXRAD Program to he beginning of the program.

FAA costs are therefore "front loaded" to reflect the early delivery of all of the FAA-owned NEXRAD units.

TERMINAL NEXRAD

Question. What is the status of the 17 Terminal NEXRAD weather radar systems we funded last year?

Answer. Terminal NEXRADs are being procured under the NEXRAD contract (contract award expected July 1987). Two out of first ten systems (limited production buy) are terminal NEXRADs. Fifteen more systems will be in the full NEXRAD production buy (contract option exercised July 1988).

Question. Will the operational tests of this system be completed in 1987 as you indicated?

Answer. Initial operational test of NEXRAD hardware and software will be completed in May 1987. Full operational tests will be completed in mid 1988. Operational evaluation of terminal NEXRAD unique meteorological algorithms will be conducted in Denver, Colorado, in 1987 and 1988 using the FAA Doppler weather radar support facility.

Question. When will these systems be deployed?

Answer. The implementation phase of the terminal NEXRAD systems will be from November 1990 to September 1992.

Question. Will all A-109 test requirements be completed for the terminal NEXRAD system before you plan to commit to a full production contract?

Answer. The only difference between NEXRAD and terminal NEXRAD is some of the meteorological algorithms. The hardware, signal processing software, and some algorithms are identical. The NEXRAD/terminal NEXRAD contract award has been slipped 6 months until July 1987 to allow time for additional prototype testing. This provides us with additional confidence in the final product. Since NEXRAD follows A-109 test requirements, terminal NEXRAD will also meet these requirements. Terminal NEXRAD unique algorithms are being fully tested using the FAA Doppler weather radar test bed.

Question. If not, why not; and how confident are you that this equipment will be delivered on time, on budget, and fully capable under your procurement plan?

Answer. Based on the program progress to date and FAA's own parallel Doppler weather radar activities, we have high confidence in an on time, on-budget and fully capable terminal NEXRAD equipment delivery.

It is our understanding that wind shear research is continuing at Denver during 1987 and 1988. This work includes the development of an automated detection and delivery system for the terminal Doppler weather radar.

Question. What is the status of this research, when will it be completed, how does it relate to the timing of the terminal NEXRAD and TDWR procurements, and how confident are you that this research will be completed according to the current schedule?

Answer. The doppler weather radar test bed that was operated in Memphis in 1985 and Huntsville in 1986 has been moved to Denver for operation in 1987 and 1988. The wind shear detection algorithms that will be implemented in both terminal NEXRAD and TDWR have been developed using data from the Memphis and Huntsville tests. These algorithms will be documented this spring and fully tested in 1987 using the test bed at Denver. An operational evaluation will be conducted in Denver in 1988.

The terminal NEXRAD software package will be documented in time to give to the NEXRAD contractor at contract award and will be validated in sufficient time for implementation. The contractors have indicated that they need 18 months to implement new algorithms and the algorithm package will be available 26-29 months prior to first delivery. The operational evaluation will be conducted prior to first delivery.

For the TDWR the algorithm package will be documented and validated and an operational evaluation using the test bed will be conducted prior to contract award.

Based on progress to date we are confident that the algorithm package will be ready on schedule and available for use in terminal NEXRAD and TDWR.

Question. Is there a need to deploy terminal NEXRAD radar at any additional sites beyond those 17 that were funded last year? If not, Why not?

Answer. Terminal NEXRAD is an interim system to cover major airports until TDWR is available. The first TDWR will be delivered around the same time as the 17th terminal NEXRAD so it would not be cost effective to purchase additional terminal NEXRAD units.

TERMINAL NEXRAD/DOPPLER

Your plan is to use modified NEXRAD systems as a weather radar for the terminals until the Terminal Doppler Weather Radar is developed. At that time the modified NEXRADs would be redeployed for en route use (p.24).

Question. What are the major differences between the modified NEXRAD and the ultimate terminal Doppler system -- especially as it relates to wind shear detection?

Answer. The major differences will be in the radar frequency (S band for terminal NEXRAD versus C band for TDWR) and the scanning capability (360° scan only for terminal NEXRAD versus sector and 360° scan capability for TDWR.

Question. How long will it be before the ultimate terminal doppler system can be ready for deployment?

Answer. Based on a September 1988 contract award, the first operational site delivery TDWR is expected in September 1992.

Question: When the terminal Doppler weather radar (TDWR) is fully developed, do you plan to deploy this system at any additional sites beyond the 17 Terminal NEXRAD sites that were funded in fiscal year 1987? If so, Why?

Answer. The FY-1988 terminal Doppler weather radar budget includes funding for 24 sites, (22 operational sites and 2 support sites), which are in addition to the 17 terminal NEXRAD sites. The number of sites that will receive terminal doppler weather radar in addition to the initial TDWR and terminal NEXRAD sites has not been determined. We will work with OMB and the Congress to provide TDWR at all cost beneficial sites.

Question. Why shouldn't those sites also have interim terminal NEXRAD systems?

Answer. Since the first TDWR will be delivered around the same time as the 17th interim terminal NEXRAD, it would not be cost effective to purchase additional terminal NEXRAD units.

Question. Please provide for the record a site-by-site breakdown of your TDWR implementation plan showing each location, cost, delivery date, and operational date.

Answer. A site-by-site breakdown of the TDWR implementation plan showing each location, cost, delivery date, and operational date is provided. This information is predicated on a fourth quarter 1988 contract award and the FY-88 TDWR budget which includes funding for 24 sites (22 operational and 2 support).

TDWR SITE LOCATION	STATE	COST (ESTIMATED) DOLLARS(K)	DELIVERY DATE	OPERATIONAL DATE
FAATC ATLANTIC CITY (SUPPORT SITE)	NJ	5,416	OCT 91	APR 92
FAA ACADEMY OKC (SUPPORT SITE)	OK	5,416	APR 92	JUL 92
DETROIT	MI	5,416	APR 92	SEP 92
CHARLOTTE	NC	5,416	MAY 92	SEP 92
HOUSTON (HOBBY)	TX	5,416	MAY 92	SEP 92
FORT LAUDERDALE	FL	5,416	JUN 92	OCT 92
NEW YORK (LA GUARDIA)	NY	5.416	JUN 92	OCT 92
KANSAS CITY	MO	5,416	JUNE 92	OCT 92

WASHINGTON (NATIONAL)	DC	5,416	JUL 92	NOV 92
CINCINNATI/ COVINGTON	OH	5,416	JUL 92	NOV 92
PHILADELPHIA	PA	5,416	JUL 92	NOV 92
RALEIGH-DURHAM	NC	5,416	AUG 92	DEC 92
WEST PALM BEACH	FL	5,416	AUG 92	DEC 92
PHOENIX	AZ	5,416	AUG 92	DEC 92
DALLAS (LOVE FIELD)	TX	5.416	SEP 92	JAN 93
SALT LAKE CITY	UT	5,416	SEP 92	JAN 93
CLEVELAND	OH	5,416	SEP 92	JAN 93
WASHINGTON (DULLES INTL)	DC	5,416	OCT 92	FEB 93
LOUISVILLE	KY	5,416	OCT 92	FEB 93
DAYTON	OH	5,416	OCT 92	FEB 93
BALTIMORE	MD	5,416	NOV 92	MAR 93
BOSTON	MA	5,416	NOV 92	MAR 93
NASHVILLE	TN	5,416	NOV 92	MAR 93
SAN JUAN	PR	5,416	DEC 92	MAR 93

You are requesting $130 million to procure terminal doppler weather radar system at 24 locations.

Question. How confident are you that you will be able to make this contract award in the fourth quarter of fiscal year 1988 as indicated in your budget?

Answer. The documentation necessary to proceed with a fiscal year 1988 procurement is on schedule. The technical development activity is also on schedule. Based on current progress to date, we have a moderate degree of confidence in awarding a contract in the fourth quarter 1988.

Question. What is the status of the continuing research for the Doppler weather radar program?.

Answer. The basic technological research, e.g., ground clutter suppressions, basic weather detection, etc., for the Doppler weather radar programs is essentially completed.

Question. And when will research on the terminal Doppler weather radar be completed?

Answer. The doppler weather radars are designed with growth and expansion capability to accommodate refinements and new meteorological algorithms. Research to support radar refinements and new alogrithm development and application to FAA operations will need to continue for several more years (example of future algorithms are microburst precursors and thunderstorm initiation).

Question. Have the previously reported technical problems involving ground clutter suppression and wind shear detection capabilities in the low level areas of the airport been solved?

Answer. Yes, the FAA Doppler Weather Radar support facility has demonstrated that a radar with NEXRAD specified capability can meet the ground clutter suppression and wind shear detection requirements. Operational testing of terminal NEXRAD unique weather detection algorithms will be performed in 1987/1988 in Denver, CO.

Ground clutter suppression capability was demonstrated and wind shear data was collected at Memphis during 1985. Wind shear data was collected and an automatic microburst algorithm was tested in Huntsville in 1986.

Question. To what extent has the need for faster wind shear update rates and fully automated warning requirements been addressed?

Answer. The driving force behind the development of the terminal NEXRAD and terminal Doppler weather radar (TDWR) system was the need to provide faster wind shear update rates than could be provided NEXRAD in its normal surveillance mode. Both the terminal NEXRAD and TDWR will update wind shear warnings every minute.

Because of controller workload and the fact that they are not trained meteorologists, all wind shear detection warnings must be fully automated. The algorithm to perform this function was developed by Lincoln Laboratory using the FAA Doppler weather radar test bed operated at Memphis (1985) and Huntsville (1986). This algorithm was tested at Huntsville and will be documented in June 1987. Further demonstrations will be conducted in Denver in 1987 and 1988.

Question. Is such a system operationally ready?

Answer. Since the terminal NEXRAD hardware has been fully tested in the NEXRAD Program and the software is developed and will be fully tested and demonstrated this summer, we feel the terminal NEXRAD and Terminal Doppler Weather Radar programs are ready to proceed.

Question: Do you plan to apply all A-109 procurement steps to the TDWR procurement?

Answer. Yes, we are using the A-109 process. Due to the similarities of the NEXRAD, terminal NEXRAD and TDWR programs we feel the NEXRAD and terminal NEXRAD development activities provide a sound basis for the key decision point (KDP) 1-3:

KDP 1 - Concept Development
KDP 2 - Design validation
KDP 3 - Limited Production and Test

The acquisition process of the TDWR program is being processed at KDP 4.

Question. If, not, why not; and what technical, time, and cost risk are you assuming because of it?

Answer. Based on a NEXRAD production contract award in the summer of 1987, we are assuming minimal technical, time, and cost risks upon proceeding to key decision point 4 (full production) at this time.

Question. Do you intend to require the overall TDWR and Terminal NEXRAD systems to meet actual field operational test and evaluation criteria prior to committing the agency to a full production contract? If not, why not?

Answer. The FAA plans to perform field operational test and evaluation in Denver utilizing a Doppler weather radar test facility that is functionally the same as a terminal NEXRAD. This facility will utilize the identical algorithm package as is given to the terminal NEXRAD contractor and the TDWR bidders. In addition, since the terminal NEXRAD hardware is identical to NEXRAD, all of the hardware functions (operation, maintainability, etc.) will have undergone operational evaluation as part of the NEXRAD procurement process. The hardware differences between terminal NEXRAD and TDWR are small as was verified by the two NEXRAD contractors in an analysis completed in 1986 for a C-band version of NEXRAD.

MODE S/WEATHER

An objective of the NAS plan is to provide weather information directly to pilots thereby relieving controllers of that responsibility so they may better meet their primary mission of separating aircraft. Thus, for the weather detection systems to be effective, the data collected must be received by pilots in a timely manner. However, we understand that the new hazardous weather detection systems are not included in FAA's current plan for disseminating information to pilots via the Mode S date link system.

Question. Why not?

Answer: Some hazardous weather from the existing weather data base will be available for dissemination via Mode S Data Link in 1990. This is in conjunction with the WCP implementation

- Terminal Forecast
- Surface Observation
- Hazardous WX Advisory etc.

Hazardous weather (e.g., wind shear) information from the terminal NEXRAD and TDWR systems will initially be disseminated by the controller in a manner similar to how it is currently being done for the LLWAS system.

Question. Are you reassessing this requirement?

Answer. Evaluation is being conducted for additional hazardous weather dissemination (e.g., wind shear) that would be available for Mode S Data Link dissemination in early to mid 1990.

Also, as part of this problem, aircraft must be equipped with new Mode S Transponders and other onboard equipment to receive the weather data. Yet, we understand that only a small number of aircraft will be so equipped by the year 2000 to receive the data even if the hazardous weather data is "up linked".

Question. Under current projections, how soon would enough aircraft be equipped with Mode S transponders to make such A "up link" cost effective?

Answer. We will provide initial weather services in 1990 to coincide with Mode S implementation and initial user equipage. These services will provide the pilot with the option of receiving information via data link or voice communication. Based on equipage projections, we feel that by mid-1990 there will be sufficient equipage on aircraft flying in and out of airports equipped with Doppler weather radars to offer wind shear advisories via Mode S data link.

Question. A large portion of FAA's claimed benefits for NAS were attributed to the Mode S data link. If the new hazardous weather detection systems are not disseminated via data link, what percentage and dollar value of expected Mode S benefits would be lost?

Answer. Mode S benefits are integral to the overall benefits of the National Airspace System (NAS) improvements which in total have been estimated at $16.0 billion through the year 2000. A separate weather information benefit cannot be isolated for Mode S and data link. NAS improvements will result in reduction in aircraft delays, improvement in aviation safety, and increases in controller productivity. In the safety area, gains are expected both in collision avoidance and a reduction in accidents caused by severe weather pheonmena such as windshear. Generally, several different system components are required to achieve any particular type of benefit and it is therefore frequently not appropriate to ascribe particular benefit values to individual components. This is particularly true for Mode S.

Mode S contributes to NAS benefits primarily through enhancement of the surveillance system by providing relatively interference-free aircraft identity and selective addressing which increase both safety and controller productivity. However, attainment of these benefits also requires implementation of the advance automation system. In addition, Mode S may provide pilots with better warning of hazardous weather conditions. However, other investments such as NEXRAD radar, terminal doppler weather radar, and automated weather observation stations are also required in order to obtain weather information to be transmitted via Mode S.

Question. Would Mode S still be cost beneficial without data link?

Answer. It is likely that the Mode S system, which is expected to cost $21.2 million over the 1988-2000 period, would still be cost beneficial without data link. Although a principal reason for a Mode S transponder over an ATCRB transponder is the data link feature, two major advantages to Mode S transponders would remain without data link: first, the unique address portion of the Mode S transponder makes possible the automatic association and display on the controller's radar of transponder return with aircraft registration number, greatly reducing the difficulty and time for a controller to identify an aircraft desiring assistance. Second, certain kinds of radio interference present in high density traffic environments are reduced when a Mode S transponder operates with a Mode S ground system, as compared with an ATCRBS transponder. Not all of the garbling problems with the ATCRBS transponders and ATCRBS ground stations can be eliminated by upgrading the ground station.

Question. Would additional research, engineering and development funding for the modified NEXRAD or terminal Doppler radar programs in any way serve to accelerate field deployment?

Answer. No, sufficient funding for research, engineering and development has been provided to meet the requirements both technical and schedule wise for the earliest practical field deployment.

Question. If so, how much would be required to significantly accelerate your deployment timetable?

Answer. See answer to preceding question.

RADAR FACILITIES

Question. Please provide for the record a listing of the cost and location of each radar facility improvement described on page 25 of your justification

The cost and location of each radar facility improvement are as follows:

1.Provide radomes: $5,459,000

Beacon Only sites - ($153,000 each)
Crocker, MO
Rockville, NE
Samburg, TN

LRR Sites - ($200,000 each)

Amarillo, TX
Ashburn, GA
Atlanta, GA
Benson, NC
Benton, PA
Byhalia, MS
Citronelle, AL
Cummington, MA
Gallup, NM
Garden City, KS
Halleyville, AL
Hanna City, IL
Hutchinson, KS
Joelton, TN
Lynch, KY
Maiden, NC
Montgomery, AL
North Platte, NE
Oakdale, PA
Oklahoma City, OK
Olathe, KS
Omaha, NE
San Antonio, TX
St. Albans, ME
St. Louis, MO

2. ATCRBS Support: $5,000,000

Current ATCRBS equipment at various locations is aging and difficult to maintain, consisting in part of tube-type units. This item provides for hardware modifications to maintain the current level of performance until the Mode S replacement program can be completed.

3 En route Radar In-Service Engineering: $820,000

Various locations as required.

4. Relocate Long Range Radar : $4,162,000

La Grange, IN	($1,048,700)
McCook, IL	($1,048,700)
St. Louis, MO	($2,064,600)

5. Provide Radar Pedestal Vibration Indicator: $300,000

Various locations.

6. Expand Joint Use Radar (MAR) Coverage: $319,300

Cape Romanof, AK	$157,000
Katzebue, AK	$162.200

7. Modify Long Range Radar: $5,000,000

Various locations.

AAS

You are requesting $180 million to continue the AAS program. This is comprised of $135 million for the design competition phase and $45 million for the acquisition phase.

Question: Under your most current plan, when will you award the AAS contract?

Answer: Our current plan is to award the AAS acquisition contract between June and August 1988, with the most likely estimate being August 1988.

Question: How does that date compare to the date assumed in the budget request?

Answer: When we prepared the FY-1988 budget request we planned to award the acquisition contract in June 1988. If the acquisition contract is not awarded until August 1988, the requested $180 million will still be required in order that both design competition phase contractors could maintain a core of technical expertise and continue their activities until the acquisition contract is awarded.

Question: Will this funding breakdown ($135 million - DCP; $45 million acquisition) need to be altered due to the guidance given by the House and Senate Appropirations Committees at the end of February?

If so, how?

Answer: The guidance from the Committee will not impact the breakdown of funding in the FY-1988 budget request in which we anticipated the need to conduct additional risk reduction tasks in the design competition phase.

The guidance from the Committee will impact the acquisition phase of the program with a slippage of 6 to 8 months projected in the implementation schedule and a possible cost growth in the program of approximately $70 million.

Question: Please provide for the record a detailed breakdown of your revised AAS needs based on the Committee's guidance.

Answer: Based on the Committee's guidance, the breakdown of FY-1988 costs remains the same.

Design Competition Phase:		
Prime Contractors	$94.0M	
Other/Support	21.0M	$115.0M
AERA II		
Acquisition Phase:		
Prime Contractors	$38.0M	
Other/Support	7.0M	45.0M
TOTAL		$180.0M

Question: Please provide for the record a detailed cost breakdown of the following:

-- $94 million DCP prime contracts;
-- $41 million DCP technical support;
-- $38 million acquisition phase prime contract;
-- $ 7 million acquisition phase terminal support

Answer: A detailed cost breakdown of the major cost elements follows:

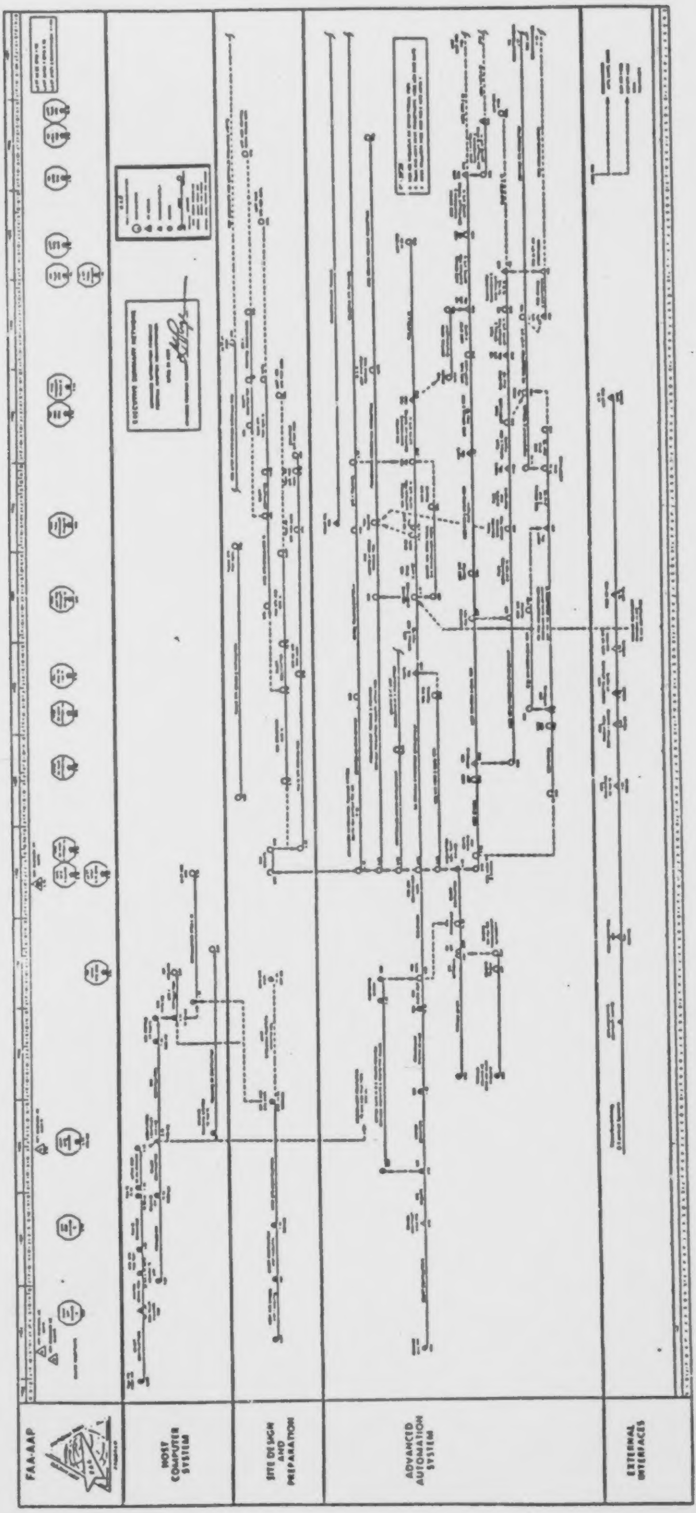
-- DCP Prime Contracts;	
IBM	$47M
Hughes Aircraft Co.	47
Total	$94M
-- DCP Technical Support;	
SEI support	$10M
MITRE support	4
AERA 2 lab development	20
FAATC test support	3
Other	4
Total	$41M
-- Acquisition Prime Contract:	
ISSS hardware/software development	$25M
Contractor termination liability	13
Total	$38M

-- Acquisition Technical Support:

SEI support	$ 4M
MITRE support	1
FAATC test support	2
Total	$ 7M

Question: Please also provide for the record an updated PERT chart of Host and AAS milestones.

Answer:

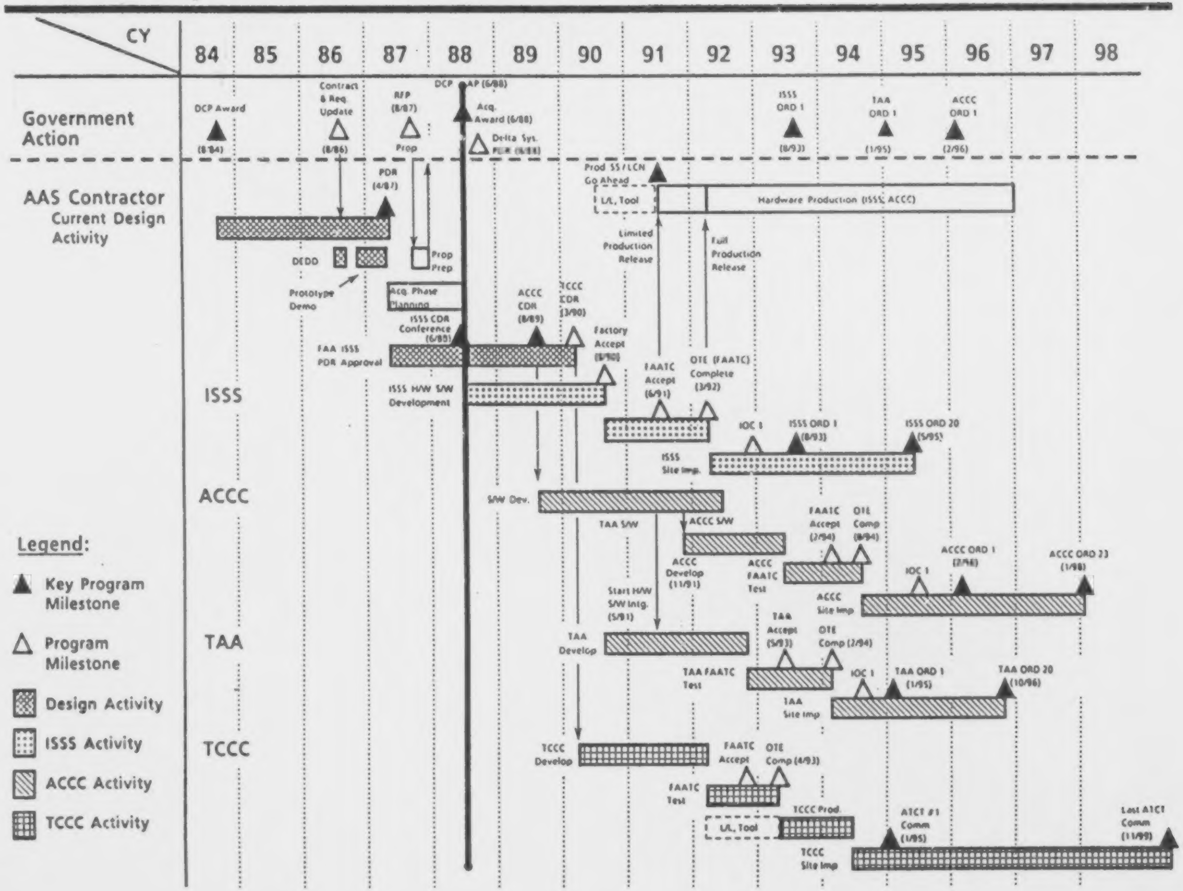

FAA-AAP
HOST COMPUTER SYSTEM
SITE DESIGN AND PREPARATION
ADVANCED AUTOMATION SYSTEM
EXTERNAL INTERFACES

Question: Please also provide for the record a detailed PERT chart of the AAS acquisition phase schedule that incorporates the directives set forth in the Committee's March, 1987, letter regarding AAS development and implementation.

Answer:

AAS Acquisition Phase Schedule

April 24, 1987



Question: Please also provide for the record a breakdown of all changes to the AAS DCP contracts that were approved by the Secretary in October 1985, including the cost of each change, the reason why each was added or changed, and the additional time each will add or subtract to the completion of the contract.

Answer: Because of the plan for early implementation (ISSS) and the complexity of the sector suite, a more definitive set of man-machine interface requirements were specified immediately after contract award. Approximately 300 essential changes to the System Level Specification were approved as a result of the System Requirements Review held with each contractor 6 months after award. Additional AERA I functions were added to the contract following National Airspace System Configuration Control Board approval of the AERA I functional requirements in early 1985. In order to maximize the compatibility of the Voice Switching Communication System (VSCS) man-machine interface with that incorporated in the AAS sector suite, the AAS contract was modified to require AAS contractors to provide a display device design for the VSCS console equipment. Based on careful consideration of color from safety and other operational perspectives, the FAA judged the use of color to be sufficiently important to make it an AAS contract requirement.

A breakdown of the changes approved by the Secretary in October 1985 and their costs follows. These changes had a cumulative impact of extending the design competition phase 6 months.

- Sector Suite man-machine interface	$ 39.2M
- System level specification changes	12.3
- AERA I functions	23.2
- VSCS interface	14.9
- Color displays	63.4
- Total	$153.0M

Question: What is the status of the independent AAS cost/benefit study we asked you to conduct several years ago?

Answer: Preliminary results of the benefit, cost and risk analyses requested in House Report 99-450 regarding our fiscal year 1986 budget are available and are under review within the FAA. Following this review, the study will be updated and the final documented results are scheduled to be completed in December 1987.

Question: What is the status of your AAS technical risk assessment?

Answer: The FAA has completed its studies of the risks associated with the AAS program.

Question: When will it be completed?

Answer: A report summarizing the program risks and the associated risk management plans will be completed in June 1987.

HOST

You are requesting $5.2 million for Host computer contractor maintenance.

Question: How soon will it be before FAA personnel can perform this maintenance?

Answer: The analysis that compared costs of contract maintenance and FAA maintenance for the Host computers was updated in 1987 to reflect experience with mean time between failures of the installed computers and revised estimates of the costs of establishing an inventory of initial spares with recurring logistics support needed for FAA maintenance. This revised study indicates it would be less costly to continue with contractor support for logistics support and field replacement of failed components.

The FAA plans to continue contract maintenance support on the Host. Indepth training has been provided to FAA technicians and additional training will be provided so that they will be able to interact more effectively with contractor engineers, diagnosis incipient, latent problems before they become real, and grow in understanding the Host hardware/software technologies to become our experienced system engineers by the time the AAS is implemented. Procedures will be established to measure contractor performance on a continuing basis.

Last year you stated that unexpected Host computer software problems had caused a delay in Host implementation of at least three months.

Question: Have you resolved this problem?

Answer: The Host computer software problems have been resolved.

Question: What will the delay be in implementation compared to the July 1985 contract schedule?

Answer: The resolution of these problems, along with the delivery of documentation, caused a total of 6 months delay in the contract schedule.

NAS SOFTWARE/CONTRACTOR SUPPORT

You are requesting $10.441 million for contractor support to update, develop and implement NAS software.

Question. Why can't FAA staff perform this work?

Answer. The FAA En route Software Support staff has not been increased to provide operational implementation of software delivered by NAS Plan projects. This problem has been compounded by a loss of skilled software development personnel through attrition. Rather than increasing staff to meet a workload peak, the FAA has used contractor resources from CSC and IBM to provide support to update, develop and implement NAS en route software. This funding is requested to continue that contractor support at an expanded level.

Question. Why is your workload so much heavier than originally planned for?

There are two primary reasons why workload is heavier than anticipated. Several projects requiring enhancements to NAS en route software are delivering products baselined in a 9020 system version, that require updating to the latest Host computer software release prior to implementation. In addition, the en route software has been frozen since 1984 in order to transition to the Host computer. This has caused a tremendous backlog of casefiles and program trouble reports which must be analyzed and have appropriate software modifications designed, developed and implemented.

RADIO TONE CONTROL

On page 31 you are requesting $70.6 million for Radio Tone Control (RCE) Equipment. A total of $64.7 million was appropriated for this program in fiscal years 1983 and 1985.

Question. How much of that amount has been obligated to date?

Answer. In fiscal years 1983 and 1985, a total of $122.2 million, $64.7 million under this item and $57.5 million under the FSS section of the budget, was appropriated for the RCE program. Of the $122.2 million, approximately $105.0 million has been obligated as of May 1987.

Question. And, of the unobligated amount, what is your obligation schedule?

Answer. The total 1983 appropriation has been obligated. The remaining balance of 1985 appropriation will be obligated by the end of FY 1988.

TRAFFIC MANAGEMENT

You are requesting $22.7 million to upgrade your traffic management system. Last year's budget indicated the 1987 to 1988 cost for this upgrade would total $29.48 million. This year this total cost has increased to $36 million -- a 22 percent increase in one year.

Question. Why such a significant increase?

Answer. As you are aware, the FAA experienced a significant surge in air traffic delays in 1986. To respond to this problem we have several initiatives underway, including an expansion of the scope of our planned automation software for the Traffic Management System (TMS).

Our cost growth (22%) is the result of additional software development for the above items as well as an increase in cost for TMU site preparation and program management, technical and hardware maintenance support.

Question. Please list each cost growth item.

Answer. We are adding new automation interfaces between designated high density terminal control facilities and the TMUs as a result of Air Transport Association and FAA studies that indicate that significant benefits will be achieved.

Operational testing of the Departure Sequencing Program (DSP) has identified several software enhancements which will significantly increase the effectiveness of this program to reduce departure flow congestion.

Finally, we are automating a flow control program, previously performed manually, which will help to decrease arrival flow congestion at our high density airports.

According to the information provided last year (House Report p.757), the five major procurement milestones for upgrading your traffic management system were to be completed between April 1987 and November 1987.

Question. Has this schedule slipped?

Answer. Contract modifications for development of a part of the new TMS software were awarded by April 1987 as planned. The remaining software development was incorporated into the new contract for metering hardware which is expected to be awarded by September 1987.

Procurement of the metering list and departure spacing hardware is on schedule for a September 1987 contract award.

Question. If so, why and how long?

We delayed the solicitation and contract award for the Traffic Management Unit (TMU) color weather radar displays to combine this procurement with a larger buy of weather displays on the FSAS project. Contract award is expected by June 1988.

Contract award for the central computer has been delayed to August 1988 to complete a study of replacement alternatives and associated performance requirements.

Question. Please provide a table comparing your current traffic management system procurement timetable with the original schedule proposal for this program and explain the reason for any delays.

Answer. The major procurement milestones are as follows:

Program element	Solicitation	Contract Award	Delivery
Develop software for required new TMS functions			
Modifications to existing contracts	11/86	4/87	11/89

Add to new hardware contract	5/87	9/87	12/89
Procure metering list hardware	5/87	9/87	12/89
Procure color weather radar displays	6/87	6/88	12/88
Procure departure spacing hardware	5/87	9/87	7/88
Replace central flow control computer and rehost software	8/87	8/88	4/90

Solicitation and contract award for the TMU color weather radar displays was delayed to obtain cost savings by combining this procurement with a larger color graphics procurement on the FSAS project. This delay will have minimal effect on the TMU deliveries (delay from 11/88 to 12/88).

Although the solicitation for the metering list and departure spacing hardware are delayed from 4/87 to 5/87, contract award is still expected by 9/87. Delivery of departure spacing hardware will be completed by 7/88 rather than 11/88. Delivery of metering list hardware was delayed from 5/88 to 12/89 to match delivery of associated En route metering software.

Solicitation and contract award for the central flow control computer have been delayed to 8/87 and 8/88, respectively, to complete a comprehensive study of alternative replacement architectures and associated performance requirements and risks. Delivery of the rehosted computer is expected to be completed by 4/90.

Two contract modifications to existing contracts were awarded by 4/87 for development of a part of the new TMS software. Plans for another modification to complete remaining software were changed and this effort was added to the new contract for metering and departure spacing hardware. This revised approach will result in one contractor integrating the TMU hardware and software rather than two as originally planned.

Question. Please also provide for the record a detailed cost breakdown of the entire $58.166 million traffic management system upgrade program, and compare that to the costs assumed in last year's budget justification (p.FE-27), and explain any cost increases.

Answer. The following is a Traffic Management System (TMS) cost summary

FY 1983 ($8.0M)

Central Flow Control Siting	$1.3
New Central Flow hardware	$4.3
Rehost software	$2.4

FY 1984 ($3.8M)

Data multi-plexing hardware	$0.5
Central Flow software development	$0.9
Interfacility Flow Control Network(IFCN) and workstation software development	$1.5
Site preparation	$0.2
Engineering/admin support	$0.7

FY 1985 ($3.9M)

Central Flow facility modifications	$1.3
Traffic Management Unit (TMU) workstations, training and software development	$2.3
Maintenance contracts	$0.1
Site preparation (TMU)	$0.1
Engineering/admin support	$0.1

FY 1986 ($6.4M)

Sector Loading software development and Central Flow software enhancements	$3.6
IFCN/workstation software development	$1.6
Maintenance support contracts	$0.3
Engineering/admin support	$0.9

The remaining $36M of the total $58.1 is included in our FY 1987 and 1988 budget requests.

FY-1987 ($13.3M)

Central Computer and rehost software	$ 4.6
Color weather displays	$ 1.3
Departure Spacing hardware	$ 0.8
Metering list hardware	$ 0.4
Software for new TMS functions	$ 4.3
Program Management and technical support	$ 1.9

FY-1988 ($22.7M)

Central Computer and rehost software	$14.5
Hardware Maintenance Support	$ 1.2
Software for new TMS functions	$ 3.5
TMU site preparation	$ 1.0
Program Management and technical support	$ 2.5

The cost growth in the project from the FY 1987 budget request to the present FY 1988 budget request is due to additional software development for new automation interfaces between the TMUs and designated high density terminal facilities, enhancements to the Departure Sequencing Program and automation of a flow control program to decrease arrival flow congestion. Additional costs reflected in our FY 1988 request are due to an increase in the costs to prepare TMU and tower sites for new automation hardware and higher than originally estimated costs for program management, technical and hardware maintenance support.

AIRPORT SURVEILLANCE RADAR

On page 37 you are requesting $48.2 million to continue your airport surveillance radar (ASR) replacement program. This would be the sixth year of funding for this program. Last year, you told the House Committee that there was a 4-month slippage in the latest ASR contact schedule due to "unavailable electronic components".

Question. Why were these components unavailable?

Answer. Parts availability has been a problem on several of our programs. Problem stems primarily from two factors.

- Vendors are not maintaining large stocks on their "shelf" as they have in the past. This is due to rapid changes in technology which makes vendors reluctant to be caught with "obsolete parts.
- Demand for integrated circuits has increased rapidly in the last few years (e.g., toy industry and auto industry use of IC's)

Question. Has the 4-month delay been made up?

Answer. The program delay has not been made up.

Question. Is Westinghouse going to absorb any or all of the cost increases associated with this delay? If not, why not?

Answer. Since this is a fixed price contract the contractor will absorb any cost increases associated with this delay.

ASR/WEATHER

GAO has raised a question concerning controller utilization of the added weather capability of the ASR system.

Question. Has FAA established a policy on whether the five levels that can be hazardous to aviation will be given to pilots?

Answer. The FAA has determined that weather will be issued as displayed on the ASR-9 radar; however, the air traffic control policy and procedures to be implemented have not been determined.

Question. How will ASR-9 weather information be disseminated?

Answer. We have not yet determined how weather displayed on the ASR-9 system will be disseminated to the pilot. Upon completion of operational testing of the system (scheduled for the summer of 1987) the determination will be made.

FAA testimony of October 1985 indicated that ASR-9 weather data would interact with other NAS Plan weather systems and processors and be disseminated to pilots via the MODE S data link.

Question. Does FAA no longer plan to disseminate the ASR-9 weather data via data link?

Answer. The FAA's October 1985, testimony concerning the use of the ASR-9 weather data was based upon the idea of using the ASR-9 weather data as NEXRAD network gap filler information. Now that the NEXRAD siting studies have been completed and the ASR-9 sites have been established, we find that while there are some gaps in the desired NEXRAD coverage, corresponding ASR-9 coverage does not exist. Therefore, at this time a requirement for having ASR-9 weather data interact with a NAS Plan weather systems does not exist. The primary sources of hazardous weather information will be the NEXRAD and Terminal Doppler Weather Radar (TDWR) systems. The NEXRAD network will provide adequate thunderstorm, hail, and tornado information for aircraft operating in the Continental National Airspace System. The TDWR will provide the low level wind shear, gust front and supplemental reflectivity data at those airports meeting the installation criteria.

Question. If all five hazardous levels are not provided won't there be hazardous weather information that is not delivered to pilots?

Answer. Until the NEXRAD and TDWR systems are operational, the FAA plans to provide pilots information derived from the ASR-9 weather channel. This information will be reflectivity information and will be broadcast by terminal controllers. Whether or not all five hazardous levels will be transmitted has not been determined. Air Traffic and Flight Standards are working on this issue at the present time and will have the answer before the ASR-9 is operational.

MODE S

On page 39 you are requesting $16.7 million for the Mode S radar beacon system. Of the total, $14 million is requested to fund "the first portion of the government's projected liability under the fixed price incentive contract".

Question. Would you explain more fully what that "liability" is?

Answer. Federal Acquisition Regulations explain that a fixed price incentive type contract establishes a "target" cost, with the Government and the contractor sharing savings or excesses from the target. If the contractor achieves his target cost, he earns a "target" profit. If his costs are less, his profit is higher; if his costs exceed the target, his profit is lower. The Government's share is limited by a "ceiling" price, beyond which the contractor must totally absorb all further cost increases.

The Government/contractor share ratio for Mode S is 85%/15%. Latest projections from the contractor indicate that he will substantially exceed the target cost, and the funding request is slightly less than half the projected liability if the contractor's costs should reach ceiling.

Question. Please provide for the record a detailed explanation of your "Liability" under the Mode S contract and how your $14 million request was calculated?

Answer. See answer to preceding question.

Question. Please provide for the record a summary of the Mode S contract including a comparison of the original and current contract cost, terms of contract, name and location of contractor, number of units, a summary of each contract amendment and the cost of each, and a comparison of the original delivery schedule versus the current delivery schedule.

Answer. The Mode S contractor is the WEC/SDC (Westinghouse/Systems Development Corporation) Joint Venture, in Baltimore, MD. The Mode S contract is a fixed price incentive contract with an established target price. The basic contract including options was $224,481,826, for 137 units. Miscellaneous specification changes have increased the cost of the contract by $78,328.

Key milestone	Contract Date
First delivery to the FAA Technical Center	April 1987
First Delivery to an operational site	May 1988
Last Delivery to an operational site	January 1992

The contract has not been modified to change these dates at this writing, but a modification is expected soon to delay the Technical Center delivery by 21 months, and the operational site deliveries by 11 months.

Question. Please also provide for the record a listing of each Mode S ground location along with the original and current delivery dates and operational dates.

Answer. The Mode S ground stations are scheduled to be delivered to the following operational locations. The deliveries were scheduled in the original contract to occur from May, 1988 to January, 1992. The contract has not been modified to change these dates at this writing, but a modification is expected soon to delay the operational site deliveries by 11 months. Although there are no changes contemplated to the list of sites identified, the order in which equipment is delivered to each site will be changed from the original contract.

Sites

Pensacola, FL
Roanoke, VA
Jackson, MS
Bristol/Tri City, TN
Austin/Brgstrm, TX
Corpus Christi, TX
Bismark, ND
Wichita/McConnell, KS
Wash/Dulles, VA
Tulsa, OK
Providence/Quonset, RI
Raleigh, NC
Syracuse, NY
Norfolk, VA
Rochester, NY
Little Rock, AR

Charlotte, NC
Ontario/March AFB, CA
Birmingham, AL
Omaha/Offutt, NE
Charleston, SC
Chicago/O'Hare, IL
Chicago/Tnlypk, IL
New York/JFK, NY
Newark, NJ
White Plains, NY
Islip, NY
Atlanta, GA
Andrews AFB, MD
Wash/Nat'l, VA
Oakland, CA
Dallas/Addison, TX

Dallas/Cllyvle, TX
Pittsburgh, PA
Boston, MA
Ft. Lauderdale, FL
Miami, FL
Los Angeles, CA (#1)
Los Angeles, CA (#2)
Philadelphia, PA
Detroit, MI
St. Louis, MO
Denver, CO
Cleveland, OH
Seattle, WA
Minneapolis, MN
Phoenix, AZ
Baltimore, MD

Sites

Kansas City, MO
Indianapolis, IN
Memphis, TN
Columbus, OH
New Orleans, LA(Moissant)
San Antonio, TX
Long Beach, CA
Buffalo, NY
Cincinnati, OH (CVG)
Houston, TX (IAH)
Houston, TX (Hobby)
Milwaukee, WI
Dayton, OH
Portland, OR
Las Vegas, NV
Nashville, TN
Louisville, KY
Windsor Locks, CT
Jacksonville, FL
Salt Lake City, UT
Oklahoma City, OK
Albuquerque, NM
Orlando, FL
Burbank, CA
Harrisburg, PA
Des Moines, IA
Albany, NY
El Paso, TX (Biggs)
Shreveport, LA
Tucson, AZ
Grand Rapids, MI
Sacramento, CA (McClellan)
Tampa, FL
Sarasota, FL
Cedar Rapids, IA
Midland, TX
Fargo, ND
Green Bay, WI
Billings, MT
Evansville, IN
Spokane, WA
Fresno, CA
Springfield, MO
Macon, GA (Robbins)
Lake Charles, LA
Santa Barbara, CA
Bangor, ME
Abilene, TX (Dyess)
Wilmington, NC
Duluth, MN
Great Falls, MT
Ft. Smith, AR
Tallahassee, FL
San Diego, CA (Miramar)
Santa Ana, CA (El Toro)
San Jose, CA (Moffat)
Marietta, GA (Dobbins AFB)
Cecil Field, FL
Hampton, VA (Langley AFB)
Tonopah, NV
Cedar City, UT
Amarillo, TX
Tyler, MN (Chandler)
Mesa Rica, NM
Francis Pk, UT
Rockville, NE (Hastings)
St Albans, VT
Keno, OR
Battle Mountain, NV
Boise, ID
Rock Springs, WY
Parker, CO
Ashton, ID
Grand Junction, CO
Red Bluff, CA
Angel Peak, NV
Lusk, WY
Gallup, NM
Lovell, WY
Fallon, NV
Gettysburg, SD
Trinidad, CO
North Platte, NE
Garden City, KS

Question. Please also explain the requested $2.7 million for Mode S contract changes.

Answer. The $2.7 million will fund minor changes to the Mode S specification to accommodate the evolution of the NAS system design.

Question. What are these changes, why are they needed, and why weren't they in the original specification?

Answer. The Mode S specification was developed prior to the evolution of the NAS System Design, which requires a two-second throughput (time delay between radar processing and presentation on the controller display).

Compliance with the two-second throughput specification, requires moving the tracker function from the ATC computer to the radar system.

The $2.7 million provides funding to make changes to the Mode S system to accommodate future capability in accordance with this requirement.

ASR RELOCATION

You are requesting $7.715 million to relocate ASR Radars. This is over and above the funds appropriated for the so-called ASR-9 "Leapfrog" program.

Question. Would you explain further where these ASR radars are located, why they must be relocated, where they will be relocated to, and why they were not part of the original leapfrog program?

Answer. The "relocate ASR radars" are located at the following sites:

Grand Rapids, Michigan - relocation is required due to area construction.

Longview, Texas - relocation will be 13 miles west of existing airport, will increase considerable coverage at Tyler Airport and reduce delays.

Palm Springs, California - relocate radar 5 miles to improve radar coverage blocked by mountainous terrain northwest and southeast of airport.

Phoenix, Arizona - relocation will improve coverage which now has operational inefficiency level limits capability.

South Bend, Indiana - relocation is required due to area construction.

Tampa, Florida - raise tower height due to construction of high-rise buildings.

Wilkes Barre, Pennsylvania - will be relocated to comply with the Air Traffic Control (east coast) plan which cites the current location has insufficient radar coverage.

The leapfrog program covers the replacement of an older radar at its existing site. Because of the reasons above, these radars are being relocated from their existing sites, and therefore are covered under a separate relocation line item.

Question. Your are requesting $10.5 million to establish an ASR radar at Charlottesville, VA airport. Would you explain the problems this radar will address?

Answer. Approach control service for Charlottesville is currently provided by the Gordonsville sector at Washington Center. Gordonsville sector is highly complex, monitoring heavily used military training routes as well as parachute jumping east of Charlottesville.

The Gordonsville sector controls a major fix for arrivals/departures for National, Dulles, Atlanta, New Orleans, and Houston airports, as well as, Norfolk and Richmond departures. This traffic mixes with lower, slower traffic operating into and out of Charlottesville, Lynchburg, and Shenandoah.

Establishment of an ASR at Charlottesville will enable approach control services to be provided by the terminal facility at Dulles airport, thus relieving the ARTCC's second busiest sector.

This action will significantly reduce delays, improve overall service into and out of the Washington area, and enhance safety through improved low altitude vectoring capabilities and airspace utilization in mountainous terrain.

Question. Does this site meet your ASR establishment criteria?

Answer. Charlottesville meets our Phase I ASR establishment criteria which is based on airport air traffic activity. The air traffic activity ratio required is 1.0. Charlottesville achieves a 2.35 ratio. Although Charlottesville only achieves a .95 Phase II benefit/cost ratio, which is .05 short of the minimum required, an ASR is essential to support the highly complex area of air traffic arrival/departure routes servicing Washington's National and Dulles airports, Norfolk and Richmond airports, as well as, the Charlottesville, Lynchburg and Shenandoah, Virginia airports.

NEW YORK TRACON

Last Year, it was indicated that one of the principal factors for the high cost of improving the New York TRACON was that the contract was "sole source" instead of competitively bid.

Question. On what basis was a "sole source" contract justified?

Answer. Competitive request for proposals was released June 1985 and two offerors responded by the September 1985 response deadline. One offeror was eliminated and single source negotiations were completed January 1986.

Question. What changes to your procurement/contracting policies or procedures have you made as a consequence of your experience with this contract?

Answer. As stated above, the original intent was to enter into a competitively negotiated procurement; however, one offeror was eliminated. We have not changed our procurement/contracting policies or procedures as a result of the experience with this contract.

Due to problems encountered with this contract, we are restructuring the contract to allow closer monitoring of Stage 1 and 2 contractor expenditures.

Last year you stated that it was "critical" to install the upgraded equipment (ARTS IIIE) at the New York TRACON by June 1987.

Question. How late will you be compared to this date, and will this cause you to artifically constrain traffic to ensure safety?

Answer. The current implementation schedule is:

- February 1988 - deliver new displays and solid state memory to New York
- December 1988 - new displays and solid state state memory (Stage 1) operational
- December 1989 - (Stage 2) new processors and final software operational

Several software modifications to current system are in process to increase system capacity.

Software related procedures for current system such as rho-theta masking identified for additional system capacity.

The above modifications/procedures with judicious traffic management will not cause us to artificially constrain traffic.

Question. Please provide for the record a detailed explanation of the cost overruns and technical problems that have been experienced with the New York TRACON project.

Answer. The major categories contributing to the projected FY-88 cost overrun of $22.1 Million are:

Contract Stage 1 and Stage 2 - $15.5 Million for the continuation of Stage 1 and Stage 2 contractual requirements. Existing funding has been depleted due to less than satisfactory contractor response to contractual requirements, particularly in design documentation requiring a significant amount of rewrite. These rewrites caused substantial overall schedule delays to a project structured with premium labor rates to meet a highly compressed schedule. Subcontractor delays of display delivery introduced an additional delay due to design change and material procurement problems.

Documentation-$1.2 Million to correct/update the software computer program functional specification and to provide for validation of air traffic training tasks.

Final software change/implementation-$1.2 Million to bring contract baseline software up to current operational baseline as a result of schedule delays in project plus two additional displays.

Engineering and repair services-$1.250 Million for contractor support of on-the-job training, operational test and evaluation, unique problem resolution and circuit board repair.

FAA Technical Center/MITRE/System Engineering Integration Contractor Support-$2.650 Million to ensure contractual requirements for system are satisfied throughout the extended project schedule.

There have been no real technical problems to date, largely due to the fact the project is just completing design phase leading to critical design review. The delay incurred to ensure a quality top down design package should minimize any system, as well as technical problems, later.

Question. Please also provide for the record a breakdown comparing the original and current schedule and costs for each of the following steps related to the New York TRACON project: system design, production, implementation, and integration.

Answer. The following is the schedule breakout for the steps requested for the original and current projected schedule with replan.

PROJECT STEPS	ORIGINAL SCHEDULE	CURRENT PROJECTED SCHEDULE WITH REPLAN
System Design		
Stage I	Nov 86	Jul 87
Stage II	Sep 87	Jun 88
Production		
Early Display/Memory		
Delivery	N/A	Feb 88
Stage I	May 87	Jun 88
Stage II	Jun 88	Jun 89
Implementation		
Stage I	Jun 87	Oct 88
Stage II	Jul 88	Dec 89
Integration		
Stage I	Jun 87	Dec 88
Stage II	Dec 88	Feb 90

The contract does not specifically provide for the breakout of costs related to the steps requested. The following represents our best estimate using parametric models applied to both original and current projected project costs.

	SYSTEM DESIGN	PRODUCTION	IMPLEMENTATION	INTEGRATION	TOTAL
ORIGINAL COSTS:					
Contract	$11,206	$28,495	$ 5,907	$ -0-	$45,608
Other Program Costs	2,563	2,564	2,136	1,282	8,545
TOTAL	$13,769	$31,059	$ 8,043	$1,282	$54,153
CURRENT PROJECTED COSTS WITH REPLAN					
Contract	$31,245	$38,175	$ 8,088	$ -0-	$77,508
Other Program Costs	5,255	3,182	2,727	1,363	12,527
TOTAL	$36,500	$41,357	$10,815	$1,363	$90,035

Question. Please also explain for the record the terms of the New York TRACON contract including name and location of all contractors and subcontractors, cost escalation requirements and a description of each contract modification including the added time and cost of each.

Answer. Contract Items-The New York TRACON contract is a combination fixed price and cost plus incentive fee. The contract value is currently $45.6 million of which $6.7 million is fixed price and $38.9 million is cost plus incentive fee. The cost sharing formula for the overrun projection is 80/20.
FAA and UNISYS share the overrun, with FAA paying 80% and UNISYS paying 20% of the actual overrun.

Contractors-The names and locations of all contractors and subcontractors are as follows:

Contractor
Sperry Corporation (UNISYS)
P.O. Box 64525
St. Paul, MN 55164

Subcontractors

1. Sperry Corporation
Computer Systems Div.
3333 Pilot Knob Road
Eagan, MN 55164

2. Varix Corporation
c/o Sector Eng.
Sales, Inc.
8441 Wayzata Blvd.
Suite 205
Minneapolis, MN 55426

3. Esprit Systems, Inc.
c/o Computer Marketing
Corporation
501 East Highway 13
Burnsville, MN 55337

4. Motorola
c/o Hamilton - Avnet
10300 Bren Road East
Minnetonka, MN 55343

5. Magnavox
1313 Production Road
Ft. Wayne, IN 46808

6. Datum
1363 South State
College Blvd.
Anaheim, CA 92806

7. Micom Systems, Inc.
4100 Los Angeles Ave.
Simi Valley, CA 93062

8. Kinemetrics/True Time
3243 Santa Rosa Ave.
Santa Rosa, CA 95407

9. Lamda Electronics
Power Supplies
515 Broad Hollow Road
Melville, Long Island,
NY 11747

10. Sperry Corporation
c/o Sperry Commercial
Division
P.O. Box 500
Blue Bell, PA 19424

11. T - Bar, Inc.
141 Danbury Road
Wilton, CT 06897

12. Control Data Corp.
8100 34th Avenue So.
Minneapolis, MN 55420

13. Kennedy Company
1600 South Shamrock
Monrovia, CA 91016

14. E.F. Industries
12624 Daphne Avenue
Hawthorne, CA 90250

15. JMI Software
Consultants, Inc.
P.O. Box 481
904 Sheble Lane
Spring House, PA 19477

16. Index Technology Corp.
Woodfield Park Plaza
999 Plaza Drive-4th Floor
Schaumburg, IL 60195

17. Advanced Systems
Technology/ISDOS, Inc.
325 East Eisenhower Pkwy
Suite 103
P.O. Box 4179
Ann Arbor, MI 48106

18. Community Electronics
Corporation
911 Plymouth Avenue North
Minnespolis, MN 55411

19. Metric Systems
Corporation
645 Anchors Street
Fort Walton Beach,
Florida 32548

20. Miltope Corporation
1770 Walt Whitman Road
Melville, Long Island,
NY 11747

21. Peripheral Dynamics, Inc.
5150 Campus Drive
Whitemarsh Industrial Park
Plymouth Meeting, PA

22. Printronix, Inc.
17500 Cartwright Rd
Irvine, CA 92713

23. Teletype Corporation
5555 Touhy Avenue
Skokie, IL 60077

24. Ossays, Inc.
c/o Hamilton-Avnet
Electronics
10300 Bren Road East
Minnet5onka, MN 55343

25. Techni-Kit Builders
1601 Victoria Avenue
Los Angeles, CA 90019

26. Tektronix
4660 Churchill Street
Minneapolis, MN

27. AD Data Systems, Inc.
200 Commerce Drive
Rochester, NY 14623

28. Bud Industries
c/o Newark Electronics
336 Hanover Street, NE
Minneapolis, MN 55413

29. DY-4 Systems, Inc.
888 Lady Ellen Place
Ottawa, Ontario
Canada K1Z 5M1

30. Digital Equipment Corp.
Suite 400
2901 Metro Drive
Minneapolis, MN 55420

Cost Escalation Requirements-The Government's requirements remain unchanged from basic contract award.

Modifications-The following contract modifications have been made with cost/impact as shown:

Modification #1 had no cost or overall schedule impact. It corrected an apparent ambiguity in the Stage 1 delivery schedule and documented other internal contract schedule changes and contract data requirement changes.

Modification #2 had funding provided in the amount of $.3 Million. Contract ceiling and schedule did not change.

Modification #3 had funding provided in the amount of $6 Million. Again, the contract ceiling nor the schedule changed.

Question. Did Martin Marietta participate in the systems engineering work for the New York TRACON project--or was it FAA personnel?

Answer. FAA and Martin Marietta personnel jointly participated beginning with specification development through source evaluation and continuing presently in contract execution.

Remote Maintenance Monitoring System

You are requesting $32.848 million for remote maintenance monitoring equipment. Since Fiscal Year 1988, $126.2 million has been appropriated for this equipment.

Question. Of that amount, how much has been obligated?

Answer. We have obligated $60.9 million of the $126.2 million.

Question. When will the remainder be obligated?

Answer. The remaining funds will be obligated in Fiscal Year 1987 and 1988 for ongoing RMS retrofits and an in-process RMM system augmentation contract.

Question. How much of the $32.848 million that you are requesting for Fiscal Year 1988 will actually be obligated in Fiscal Year 1988?

Answer. All of the Fiscal Year 1988 funding except $10.3 million will be obligated in Fiscal Year 1988. The $10.3 million will be obligated in Fiscal Year 1989.

Question. Please provide for the record a fiscal year breakdown of RMM appropriations and obligations -- including funds requested for Fiscal Year 1988. Please include the date which you expect the Fiscal Year 1988 contract option to be awarded.

Answer. The following chart identifies the funds appropriated for and obligated by the RMM program from Fiscal Year 1982 through the requested funding for Fiscal Year 1988.

	Appropriation	Obligated To Date
FY 82	$ 8.0 million	$ 8.0 million
FY 83	15.1	15.0
FY 84	1.8	1.8
FY 85	43.4	26.8
FY 86	43.4	8.5
FY 87	14.5	10.1
FY 88	32.8 requested	--

The anticipated contract to be awarded in FY 88 will be a new contract, and will not be an option to an existing contract.

TOWER REPLACEMENT

Question. On page 46 you are requesting $45.727 million to replace towers at eight locations. Please provide for the record a detailed breakdown of these projects including sites and site costs.

Answer.

Location	Cost	Total Airport Operations	Age of Tower
Houston, TX (IAH)	$10,233,900	298,271	20
New Orleans, LA (MSY)	$ 6,966,200	169,111	28
Sioux City, IA (SUX)	$ 3,934,900	60,620	28
St. Petersburg, FL (PIE)	$ 4,243,200	164,229	25
Chino, CA (CNO)	$ 3,928,700	193,364	15
Moses Lake, WA (MWH)	$ 808,200	140,652	35
New York, NY (LGA)	$ 9,414,600	365,249	23
Atlanta, GA (FTY)	$ 4,297,100	155,692	28

The following is a site by site description of the justification to replace the control tower facilities listed in the above chart.

Houston (Intercontinental), TX (IAH)

The control tower at Houston Intercontinental is in need of replacement due to three major problems. First, the construction of a new east-west parallel runway which has its east end too far (16,000 feet--over 3 miles) from the present tower for practical control. The second problem is associated with a new north-south crossover taxiway which will be shadowed by the existing hotel complex. The last problem area relates to inadequate operational space in exiting ATCT cab.

The far end of the new runway will create difficulty in visually acquiring contact with aircraft from the existing tower and subsequently losing departure slots, as well as requiring increased arrival spacing. A new taxiway bridge will be built (not visible from existing tower) to move aircraft from the parallel runways to their destination on the terminal ramps and vice versa. Without the new tower, costly delays to the users are anticipated.

New Orleans, LA (MSY)

The present ATCT, 28 years old, is on the top of a concourse which connects the main terminal and loading gates. The tower structure is drab looking and displays water marks from repeated leaks. Its location near ramp and parking areas results in a high level of noise and fuel fumes in the tower cab. One window urgently needs replacing; however, since the channels in which the window is housed have rusted badly the city does not plan to replace the window. The cab supervisors space has been used to house a BRITE display. Height of ATCT insufficient to provide good aerial view of airport.

The TRACON and administrative quarters in the basement of this concourse are inadequate due to size and physical conditions and are subject to the same noise and fume problem as the tower cab.

NOTE: Improvements beyond cosmetic are not practical because of limited space and obsolete facility constraints.

Sioux City, IA (SUX)

The replacement of the 28 year old control tower at Sioux City is needed to eliminate operational and administrative problems. Space limitations preclude adding new positions or expanding old ones to accommodate new or additional equipment.

The tower cab is not designed or sized to accommodate a radar approach control function along with the airport traffic control positions now existing at this location.

St. Petersburg (Clearwater), FL (PIE)

The replacement of this 25 year old tower at St. Petersburg is needed to eliminate operational and administrative problems. This structure is inadequate because of location, age, deteriorated condition and configuration, and improvements are not economically feasible.

The tower is 62 feet high with a ceiling too low for controllers to observe complete traffic patterns. There are numerous roof supports and window braces that obstruct visibility. Additionally, thermopane windows leak, which permits condensation between the panes, thus more problems with visibility. There is insufficient space for equipment installation in the tower.

There is no administrative space available for area supervisors. The windows in the training rooms will not open and the training room is not air conditioned.

Large areas of the airspace over the airport are not visible because the cab ceiling is low, four sided and much larger in area than the available floor space. The approach end of Runway 22, the associated taxiway and the entrance to Taxiway A from the T-hanger area is not visible because of buildings. The cab faces west which presents severe glare problems during peak traffic periods early and late in the day. A special blind hanging from the middle of the cab ceiling is required to shade the radar displays.

Chino, CA (CNO)

The Chino tower cab work space is barely adequate and cannot support the additional position and equipment now required. The facility's administrative space is also insufficient and there is no space available for required training.

Additionally, the ATCT is not high enough to provide a good aerial view of the airport.

Moses Lake, WA (MWH)

The ATCT at Grant County Airport, Moses Lake, Washington, is extremely small and cramped. The cab size is approximately 135 SF. The ATCT, built in 1952, apparently was designed for a maximum of three positions. Positions of operation today include two Local Control positions, one Ground Control, one Approach Control, and one Supervisor. However, because of the training situation, there may be six or seven personnel in the cab during the day and early evening shifts. Additional equipment planned for the ATCT will complicate the situation even further. This equipment includes FDIO and BRITE radar displays, clocks, etc.

NOTE: This improvement is extremely important to coincide with additional space required for the Congressionally mandated ASR establishment.

New York, NY (LGA)

The LaGuardia ATCT is a Level IVA Limited Approach Control Facility with 11 operating positions. Two additional positions will be required in the future to meet the increased traffic. The existing ATCT Cab, administrative and technical space is inadequate to accommodate the present or future air traffic requirements. The existing ATCT Cab is only 460 square feet and should be replaced with the new standard 625 sq.-foot cab. The ATCT should also be relocated because of inadequate visibility of gate/ramp areas and taxiway "Z".

There is no expansion capability and replacement of ATCT cab is not predicted.

Atlanta, GA (PTY)

This tower is 28 years old and in need of improvements beyond reasonable repairs. Adequate space is not available and the tower height is insufficient to provide a good aerial view of the airport.

Question. Do all eight of the towers for which you are requesting $45.727 million to replace (p. 46) meet your tower replacement criteria?

Answer. Yes; except, Moses Lake where a tower cab only replacement is required to support the radar establishment operation.

Question. Please provide for the record a listing of the locations and cost of towers that meet your replacement criteria for which funds were not requested and explain why funds were not requested in each instance.

Answer. The NAS Plan Program anticipated an average of 5 terminal air traffic control facilities to be replaced on an annual basis. Replacement requirements are in fact exceeding that number. For fiscal year (FY) 1988, 19 locations were submitted by the regions as candidates for facility replacement. Based on a thorough review, including site surveys, of these candidate locations and to stay within funding limitations, a total of 8 sites are requested in our FY-88 Congressional submission.

Two locations, Windsor Locks, CT, and Allentown, PA, met criteria for replacement, however, the addition of these two locations were considered lower priority and were not within funding limitation planning.

Location	Cost
1. Windsor Locks, CT	$ 7,550,400
2. Allentown, PA	$ 6,118,200

Question. Please also provide for the record a breakdown of the cost and location for each tower or TRACON to be modernized under your $24.698 million request.

Answer.

National Originated Modernization Projects - FY-88

Aeronautical Center, OK - Improve Training Lab	$ 1,300,000
Atlanta, GA - Environmental, Operational Building Expansion	775,500
Boston, MA - Environmental, ARTS IIIA Equipment Reconfiguration	248,600
Casper, WY - Construct Administrative Space	420,000
Charleston, SC - Environmental, Operational	265,000
Chicago ORD, IL - Replace/Upgrade HVAC	312,100
Colorado Springs, CO - Rearrange CAB control positions	225,300
Dallas-Ft. Worth, TX - Environmental, Operational Bldg. Expansion	1,572,600
Detroit City, MI - Replace/Upgrade HVAC	248,500
Fairbanks, AK - Environmental	126,500
Great Falls, MT - Environmental, Rehabilitate Operations Space	313,000
Houston, TX (TRACON) - Environmental, Security	195,100
Indianapolis, IN - Replace/Upgrade HVAC	248,500
Lawton, OK - Environmental, Operational, ICSS	588,400
Livermore, CA - Environmental, Operational	142,100
Long Beach, CA - Environmental, Operational	275,100

Longview, TX - Environmental, Operational, TRACAB/TRACON Conversion	797,000
Madison, WI - Replace/Upgrade HVAC	248,500
Nashville, TN - Environmental, ICSS, Operational	551,800
Oklahoma City, OK - Environmental, Administrative Space	481,400
Portland, ME - Environmental	128,000
Sacramento Metro, CA - Environmental, Operational	336,200
San Juan, PR - (Isla Grande) Environmental, Operational	153,900
St. Louis, MO - Expand Building Space	1,170,300
Youngstown, OH - Replace/Upgrade HVAC	248,500
Cedar Rapids, IA - FY 87 Carryover	156,600
Denver, CO - FY 87 Carryover	305,800
Salt Lake City, UT - FY 87 Carryover	183,400
Asheville, NC - FY 87 Carryover	119,600
Phoenix, AZ - FY 87 Carryover	481,200
Lewiston, ID - FY 87 Carryover	136,000
	$ 12,754,500

Mobile Air Traffic Control Towers

Atlanta, GA	275,000
Chicago, IL	275,000
Fort Worth, TX	275,000
Los Angeles, CA	275,000
New York, NY	275,000
Oklahoma City, OK	275,000
Seattle, WA	275,000
	$ 1,925,000

FY-87 Carryover to Complete Improve ATCT and/or TRACON's - Regional Projects

Omaha, NE	109,900
Olathe, KS	66,700
Baltimore, MD	287,200
Richmond, VA	233,000
Benton Harbor, MI	59,700
Bloomington, IL	59,700
Bloomington, IN	59,700
St. Louis Downtown, IL	59,700
Lafayette, IN	59,700
Mansfield, OH	59,700
Boston, MA	107,700
	$ 1,162,700

FY-87 Carryover - Provide Data Display System

Chicago, IL	105,800

FY-87 Carryover - Establish Additional Positions

Dallas-Ft. Worth, TX	456,700
Orlando, FL	391,600
	$ 848,300

Regional Originated Modernize/Improve ATCT Projects

Boston, MA	90,700
Bradley, CT	90,700
Burlington, VT	90,700
Des Moines, IA	52,300
Otis, MA	90,700
Quonset, RI	90,700
West Palm Beach, FL	22,000
	$ 527,800

Regional Originated Replace HVAC System

Boise, ID	80,100
Broomfield, CO	115,600
Everett, WA	53,700
Hillsboro, OR	115,600
Pueblo, CO	115,600
Tacoma, WA	53,700
	$ 534,300

Regional Originated Establish Additional Operating Positions

Atlanta, GA	30,600
Baltimore, MD	345,600
Chino, CA	72,500
Fayetteville, NC	220,500
Ft. Smith, AR	307,500
Gulfport, MS	185,300
Lihue, HI	75,200
Houston, TX	361,600
Longview, TX	292,500
Middletown, PA	163,900
Nashville, TN	354,700
Orlando, FL	567,300
Pensacola, FL	289,100
Sacramento, CA	109,200
West Palm Beach, FL	221,400
	$3,596,900

Regional Originated Improve/Provide Data Display System

Bangor, ME	236,100
Binghampton, NY	83,900
Bridgeport, CT	236,100
Burlington, VT	236,100
Charleston, WV	91,700
Clarksburg, WV	87,800
Harrisburg, PA	87,800
Nashua, NH	236,100
Philadelphia, PA	109,300
Portland, OR	142,800
Roanoke, VA	91,700

Akron-Canton, OH	83,700
Champaign, IL	83,700
Flint, MI	86,900
Grand Rapids, MI	86,900
Lansing, MI	86,900
Madison, WI	86,900
Rockford, IL	86,900
Springfield, IL	86,900
	$ 2,328,200

Regional Orginated Modernize/Improve Wind Detection

Monterey, CA	196,300
Palm Springs, CA	151,200
	$ 347,500

Regional Originated Replace Horizontal Radar Displays

Columbus Port, OH	117,400
Detroit Metro, MI	136,300
Minneapolis, MN	110,100
Indianapolis, IN	146,600
Milwaukee, WI	56,400
	$ 566,800

FLIGHT SERVICE STATIONS

Question. You are requesting $67.5 million for flight service station modernization.

How many facilities have been consolidated?

Answer. As of May 31, 1987, 37 flight service stations have been consolidated.

Question. How many new facilities have been opened?

Answer. As of May 31, 1987, 33 automated flight service stations have been commissioned.

Question. How many facilities do you plan to consolidate in the remainder of fiscal year 1987 and in fiscal year 1988?

Answer. There are 42 FSS's scheduled to be consolidated during the remaining months of FY-1987. Thirty-seven FSSS's are scheduled to be consolidated in FY-1988.

Question. Please provide for the record a breakdown of all FSS locations consolidated to date. Those facilities scheduled for consolidation in fiscal years 1987 and 1988 (including dates for each). The location of new AFSS facilities, the planned actual opening date for each AFSS facility, and staffing and F&E cost data for each facility broken down by fiscal year. Please categorize costs by automation, acquisition, consolidation and relocation costs.

Answer: The requested information is provided on the following pages.

The FSS's listed below are valid as of May 1, 1987

A. FSS's To Be Consolidated Remainder of Fiscal Year 1987

Location	Staffing	F&E Cost of Consolidation
Birmingham, AL	18	$160,700
Paso Robles, CA	7	100,000
Montague, CA	0	100,000
Daggett, CA	3	100,000
Needles, CA	1	100,000
La Junta, CO	4	100,000
Brunswick, GA	6	100,000
Valdosta, GA	8	100,000
Mason City, IA	8	49,000
Ft. Wayne, IN	10	100,000
Indianapolis, IN	28	100,000
Dodge City, KS	3	49,000
Emporia, KS	2	100,000
Hill City, KS	0	100,000
Augusta, ME	13	61,800
Concord, NH	13	100,000
Houlton, ME	3	61,800
Detroit, MI	39	48,000
Minneapolis, MN	36	48,000
Jamestown, ND	5	27,600
Youngstown, OH	7	100,000
Zanesville, OH	6	100,000
Columbus, OH	27	100,000
Gage, OK	3	91,600
Hobart, OK	2	79,700
The Dalles, OR	4	100,000
Johnstown, PA	5	100,000
Greer, SC	16	(Note 1)
Watertown, SD	6	27,600
Memphis, TN	24	149,000
Galveston, TX	6	84,000
Palacios, TX	2	91,700
Mineral Wells, TX	1	19,000
San Antonio, TX	45	100,000
Bryce Canyon, UT	1	100,000
Danville, VA	3	58,600
Roanoke, VA	11	47,200
Salisbury, MD	6	63,100
Albany, NY	16	100,000
Glens Falls, NY	6	100,000
Massena, NY	5	100,000
Montpelier, VT	11	79,100
Watertown, NY	5	100,000
Hoquiam, WA	2	100,000
Houghton, MI	5	100,000

Note 1 Greer consolidations costs included in relocation costs for Anniston AFSS.

B. FSS's To Be Consolidated in Fiscal Year 1988

Location	Staffing	F&E Cost of Consolidation
Melbourne, FL	13	$100,000
Albany, GA	8	100,000
Tuscaloosa, AL	7	100,000
Sacramento, CA	33	100,000
Blythe, CA	3	100,000
Akron, CO	4	100,000
Chanute, KS	5	49,300
Goodland, KS	4	49,300
Manhatten, KS	6	49,300
Russell, KS	8	49,300
Salina, KS	6	49,300
Alexandria, LA	3	100,000
Jackson, MI	6	100,000
Pellston, MI	6	100,000
Saginaw, MI	14	100,000
Traverse City, MI	8	100,000
Joplin, MO	8	100,000
Cape Girardeau, MO	7	49,000
Lincoln, NE	7	100,000
Lovelock, NV	0	100,000
Tonopah, NV	4	100,000
Baker, OR	4	100,000
Wilkes-Barre, PA	10	100,000
Myrtle Beach, SC	5	100,000
Aberdeen, SD	2	27,600
Bristol, TN	5	100,000
Crossville, TN	12	100,000
College Station, TX	5	185,000
Abilene, TX	5	199,900
Childress, TX	2	136.600
Wink, TX	1	261,000
Alice, TX	5	100,000
Bellingham, WA	13	100,000
Ephrata, WA	5	100,000
LaCrosse, WI	6	100,000
Wausau, WI	8	27,600

C. FSS Locations Consolidated as of 4/1/87

Location	Date	F&E Cost of Consolidation
Phoenix, AZ	9/27/85	$ 33,000
Douglas, AZ	7/10/86	100,000
Yuma, AZ	7/20/84	46,000
Boston, MA	3/3/84	67,000
Windsor Locks, CT	3/3/84	67,000
Key West, FL	2/29/84	154,000
Alma, GA	9/9/85	122,000
Agana, Guam	12/1/83	0
Burlington, IA	10/31/86	49,000
Des Moines, IA	9/30/85	35,000
Ottumwa, IA	12/15/86	49,000
Chicago, IL	4/30/87	48,000
Lafayette, IN	7/29/85	67,000
New Orleans, LA	9/28/85	85,000
Lafayette, LA	4/26/86	107,000
Lake Charles, LA	1/31/87	110,000
Kansas City, MO	8/30/85	93,000
Vichy, MO	1/3/87	49,000
Omaha, NE	11/17/86	100,000
Sidney, NE	12/15/86	49,000
Chadron, NE	2/3/87	100,000
Las Vegas, NV	9/27/85	303,000
Ely, NV	2/20/86	100,000
Oklahoma City, OK	9/28/85	(Note 1)
Portland, OR	12/18/86	(Note 2)
Phillipsburg, PA	8/26/86	100,000
Harrrisburg, PA	2/14/87	100,000
Houston, TX	9/5/85	(Note 3)
Cotulla, TX	11/1/84	$ 27,000
Salt Lake City, UT	8/5/86	100,000
Toledo, WA	5/10/84	31,000
Lone Rock, WI	10/8/84	70,000
Milwaukee, WI	8/20/85	93,000

Note 1. Included in relocation cost ($413,000) for McAlester, OK AFSS.

Note 2. Portland consolidation costs included relocation costs ($423,000) for McMinnville, OR AFSS.

Note 3. Included in relocation cost ($418,000) for Conroe TX AFSS.

AFSS'S Opened As of May 14, 1987

Location	Date	Staffing	Automation	Acquisition	Consolidation	Relocation
Bridgeport, CT	2/12/86	71	$ 1,639,000	$ 0	$ 134,000	$ 852,000
Cleveland, OH	2/12/86	41	596,000	0	0	833,000
Dayton, OH	2/12/86	23	1,593,000	0	0	317,000
Leesburg, VA	4/20/86	90	1,600,000	130,000	0	959,500
Macon, GA	4/20/86	31	1,608,000	0	170,000	700,500
Denver, CO	5/08/86	53	1,614,000	1,325,000	45,500	581,000
Prescott, AZ	5/08/86	53	1,601,000	0	179,000	520,000
Reno, NV	5/08/86	34	1,571,000	0	403,000	919,000
Green Bay, WI	4/29/86	45	1,612,000	0	163,000	321,000
Terre Haute, IN	4/29/86	36	1,612,000	0	67,000	321,000
Columbia, MO	5/30/86	60	1,620,000	0	69,000	600,000
Conroe, TX	5/28/86	60	1,626,000	7,000	30,000	418,000
DeRidder, TX	5/28/86	46	1,592,000	0	301,000	683,000
McAlester, OK	5/28/86	42	1,592,000	0	30,000	423,000
Hawthorne, CA	8/26/86	53	1,601,000	86,000	0	450,000
Williamsport, PA	2/15/87	18	1,600,000	0	212,000	449,000
Columbus, NE	11/17/86	31	1,603,000	0	49,000	746,000
Kankakee, IL	04/21/87	53	1,615,000	0	48,000	440,000
St. Petersburg, FL	07/23/86	29	1,591,000	0	0	669,000
Riverside, CA	09/9/86	41	1,620,000	88,000	0	717,000
St. Louis, MO	09/29/86	41	1,608,000	0	0	724,000
Wichita, KS	09/28/86	33	1,596,000	0	0	683,000
Altoona, PA	03/15/87	34	1,608,000	0	200,000	566,000

APFSS's Opened as of May 14, 1987

Location	Date	Staffing	Automation	Acquisition	Consolidation	Relocation
Islip, NY	04/20/87	67	$ 1,612,000	$ 160,000	0	$ 764,500
Millville, NJ	02/02/87	31	1,604,000	188,000	115,000	486,500
Cedar City, UT 1]	06/05/86	27	1,267,000	2] 0	58,500	899,000
Miami, FL	10/08/86	67	1,634,000	2,047,000	154,000	524,000
Lansing, MI	12/03/86	53	1,603,000	0	84,000	327,000
McMinnville, OR	12/18/86	45	1,615,000	0	0	475,500
Seattle, WA	01/15/87	67	1,593,000	900,000	52,500	735,500
Ft. Dodge, IA	06/23/86	29	1,597,000	0	35,000	597,000
Louisville, KY 1]	03/03/87	21	1,267,000	0	120,500	686,500
Nashville, TN 1]	04/01/86	30	1,601,000	1,790,000	161,000	708,000

1] AFSS's operating with Leased Service A equipment. All other AFSS's operating with Model 1 equipment.

2] Estimated M1FC costs.

AFSS's To Be Opened During the Remainder of FY 1987 As of May 1

Location	Date	Staffing	Automation	Acquisition	Consolidation	Relocation
Nashville, TN	5/15/87	23	$ 1,601,000	$ 1,790,000	$ 161,000	$ 708,000
San Diego, CA	6/8/87	39	1,592,000	0	0	895,000
Princeton, MN	6/16/87	47	1,591,000	0	48,000	440,000
Anderson, SC	6/30/87	49	1,617,000	0	25,500	661,600
Ft. Worth, TX	7/1/87	49	1,614,000	0	0	550,000
Grand Forks, ND	8/4/87	23	1,612,000	0	125,300	303,000
Jackson, TN	9/30/87	32	1,591,000	0	175,000	686,000
Anniston, AL 1]		29	1,282,000 2]	0	303,000	659,000
Bangor, ME 1]		28	1,127,000 2]	0	0	3] 590,000
Burlington, VT 1]		41	1,126,000 2]	0	0	3] 590,000
San Angelo, TX 1]		49	1,283,000 2]	0	100,000	896,000
Huron, SD 1]		21	1,114,000 2]	0	27,600	900,000
Rancho Murieto, CA 1]		33	970,000	93,000	0	$ 8830,200

1] AFSSs opened with Leased Service A equipment.

2] Estimated M1FC costs.

3] Consolidation costs included in Relocation Costs.

AFSS'S Opened As of May 14, 1987

Location	Date	Staffing	Automation	Acquisition	Consolidation	Relocation
Bridgeport, CT	02/12/86	71	$1,639,000	$ 0	$ 134,000	$ 852,000
Cleveland, OH	02/12/86	41	596,000	0	0	833,000
Dayton, OH	02/12/86	23	1,593,000	0	0	317,000
Leesburg, VA	04/20/86	90	1,600,000	130,000	0	959,500
Macon, GA	04/20/86	31	1,608,000	0	170,000	700,500
Denver, CO	05/08/86	53	1,614,000	1,325,000	45,500	581,000
Prescott, AZ	05/08/86	53	1,601,000	0	179,000	520,000
Reno, NV	05/08/86	34	1,571,000	0	403,000	919,000
Green Bay, WI	04/29/86	45	1,612,000	0	163,000	321,000
Terre Haute, IN	04/29/86	36	1,612,000	0	67,000	321,000
Columbia, MO	05/30/86	60	1,620,000	0	69,000	600,000
Conroe, TX	05/28/86	60	1,626,000	7,000	30,000	418,000
DeRidder, TX	05/28/86	46	1,592,000	0	301,000	683,000
McAlester, OK	05/28/86	42	1,592,000	0	30,000	423.000
Hawthorne, CA	08/26/86	53	1,601,000	86,000	0	450,000
Williamsport, PA	02/15/87	18	1,600,000	0	212,000	449,000
Columbus, NE	11/17/86	31	1,603,000	0	49,000	746,000
Kankakee, IL	04/21/87	53	1,615,000	0	48,000	440,000
St. Petersburg, FL	07/23/86	29	1,591,000	0	0	669,000
Riverside, CA	09/09/86	41	1,620,000	88,000	0	717,000
St. Louis, MO	09/29/86	41	1,608,000	0	0	724,000
Wichita, KS	09/28/86	33	1,596,000	0	0	683,000
Altoona, PA	03/15/87	34	1,608,000	0	200,000	566,000

AFSS's Opened as of May 14, 1987

Location	Date	Staffing	Automation	Acquisition	Consolidation	Relocation
Islip, NY	04/20/87	67	$ 1,612,000	$ 160,000	0	$ 764,500
Millville, NJ	02/02/87	31	1,604,000	188,000	115,000	486,500
Cedar City, UT 1]	06/05/86	27	1,267,000	2] 0	58,500	899,000
Miami, FL	10/08/86	67	1,634,000	2,047,000	154,000	524,000
Lansing, MI	12/03/86	53	1,603,000	0	84,000	327,000
McMinnville, OR	12/18/86	45	1,615,000	0	0	475,500
Seattle, WA	01/15/87	67	1,593,000	900,000	52,500	735,500
Ft. Dodge, IA	06/23/86	29	1,597,000	0	35,000	597,000
Louisville, KY 1]	03/03/87	21	1,267,000	0	120,500	686,500
Nashville, TN 1]	04/01/86	30	1,601,000	1,790,000	161,000	708,000

1] AFSS's operating with Leased Service A equipment. All other AFSS's operating with Model 1 equipment.

2] Estimated M1FC costs.

Question. How many AFSS's do you currently have in operation and what has been the reaction of users to these new facilities?

Answer. There are 33 AFSS's in operation as of May 31, 1987. The present technical capability of the AFSS is acknowledged and well received by the user. The FAA did encounter some initial technical problems; however, those have been resolved.

We still encounter occasional periods of peak activity where the number of incoming requests for service exceed the number of specialists available to respond. This is a purely a matter of sufficient staffing at the new facilities and will be resolved as we accomplish the additional FSS consolidations scheduled for those specific flight plan areas.

Question: Please provide for the record a detailed breakdown of (1) your $25.5 million request for FSS automation. (2) your $22.6 million request to acquire FSS facilities (including locations), and (3) your $30.4 million request for FSS consolidation/relocation.

Answer: The breakdown of the budget request for FY 1988 is as follows:

Provide Flight Service Automation

Model 1 NAS Change Proposals/Program Technical Reports	570,000
Model 1 Full Capacity Software (2nd Increment)	14,000,000
Hardware requirements (Final)	1,000,000
Off Shore equipment (Final)	2,750,000
Technical Support	1,150,000
Graphics (Partial)	5,030,000
DUATS startup	500,000
Other program costs	500,000
	$25,500,000

Acquire FSS Facilities:

Jonesboro, AR	900,000
Albuquerque, NM	900,000
Boise, ID	900,000
Elkins, W.VA	900,000
Casper, WY	900,000
Great Falls, MT	900,000
Elmira, NY	900,000
Oakland, CA	2,600,000
Equipment, various facilities	2,700,000
	$11,600,000

Consolidate FSS/Provide ICSS:

Purchase 18 ICSSs	25,300,000
50 Consolidations	4,600,000
Other Consolidation Costs	500,000
	$30,400,000

AWOS

On page 52, you are requesting $2.7 million to establish automated weather observing systems (AWOS) at flight service stations.

Question. What weather data will be collected by AWOS?

Answer. Wind Speed/direction, pressure, temperature, dewpoint, visibility, sky condition, precipitation occurrence, and precipitation type (snow versus rain).

Question. Will this totally eliminate the need for weather collection personnel at these sites?

Answer. It has not been determined if an automated system will totally eliminate the need for weather collection personnel at locations that currently have observers.

Question. Is your AWOS request in conformance with GAO's recommendation on this program?

Answer. Yes. The AWOS's will be procured as part of an NWS program for ASOS implementation, eliminating duplication between the two programs.

Question. Have the shortcomings of the AWOS automated sensors, particularly those of measuring cloud height and visibility, as identified in an earlier GAO Report, been corrected?

Answer. The previous shortcomings of the visibility and cloud height sensors have been solved.

We understand the National Weather Service has a system similar to AWOS called ASOS.

Question. Is there any duplication or overlap between those systems?

Answer. Because The National Weather Service (NWS) ASOS is functionally similar to AWOS, it is planned to have NWS procure, install, and maintain the systems as part of a single procurement.

Question. How are you coordinating these two systems?

Answer. NWS is procuring systems for FAA locations.

Question. Will the total AWOS-ASOS-ADAS system be integrated and performance demonstrated under operational conditions prior to the awarding of full production contracts? If not, why not?

Answer. The AWOS-ASOS program has been integrated by having a single NWS procurement for the systems. The NWS plan is for demonstration of prototypes, prior to production approval. The AWOS-ASOS systems may operate in a local broadcast mode until ADAS is available. ADAS will also undergo a full prototype test program before production.

Question. What is the status of your plan for placing the 300 future automated weather systems (AWOS) at towered airports?

Answer. The plan is to have NWS perform the towered AWOS requirements as part of their ASOS Program.

Question. Have new cost-benefit studies been performed since the time GAO concluded these systems were not justified? If so, what did you conclude? If not, why not?

Answer. No, a new cost-benefit study was not performed.

AIR NAVIGATION

Question. Please provide for the record a breakdown of your $17.325 Million air navigation request showing the location of each site, type of equipment to be installed, the cost of each location, and estimated delivery dates and operational dates.

Answer.

1. Convert Very High Frequency Omnidirectional Range to Doppler Very High Frequency Omnidirectional Range Facilities

Locations	Equipment	Cost	Delivery Date	Operational Date
Norfolk, VA	Doppler VOR	473,100	4/88	8/89
Albany, NY	Doppler VOR	473,100	2/88	6/89
Shawnee, VA	Doppler VOR	473,100	6/88	10/89
Cross City, FL	Doppler VOR	453,700	1/88	6/89
Rome, GA	Doppler VOR	345,100	12/87	3/89
Bridgeport, TX	Doppler VOR	522,100	10/87	12/87
Longview, TX	Doppler VOR	522,100	12/87	4/89

Total Cost $3,262,300

2. Establish, Relocate Very High Frequency Omnidirectional Range

a. Relocate Very High Frequency Omnidirectional Range and Tactical Air Navigation

Locations	Equipment	Cost	Delivery Date	Operational Date
Hillview, IL	VOR/TACAN	380,800	2/89	8/89
Adrian, MI	VOR/TACAN	380,800	7/89	1/90
Chanute AFB, IL	VOR/TACAN	380,800	5/89	11/89
Tamiami, FL	VOR/TACAN	437,400	2/89	7/89
Biscayne Bay, FL	VOR/TACAN	1,518,100	6/89	12/89
New Orleans, LA	VOR/TACAN	634,300	2/89	8/89
Pine Bluff, AR	VOR/TACAN	634,300	8/89	2/90

b. Relocate Very High Frequency Omnidirectional Range/Distance Measuring Equipment

Locations	Equipment	Cost	Delivery Date	Operational Date
Cape Girardeau, MO	VOR/DME	404,400	6/88	12/88
Manhattan, KS	VOR/DME	504,200	9/88	9/89
Detroit Metro, MI	VOR/DME	628,500	10/88	5/89
Grand Marais, MN	VOR/DME	378,400	7/88	3/89
Grand Canyon, AZ	VOR/DME	499,500	11/88	6/89

c. Establish Very High Frequency Omnidirectional Range/Distance Measuring Equipment

Location	Equipment	Cost	Delivery Date	Operational Date
Grand Junction, CO	VOR/DME	976,500	8/88	11/88

Total Cost Items 2a through 2c $7,758,000

3. Air Navigation Improvements

a. Establish Very High Frequency Omnidirectional Range-Test

Location	Equipment	Cost	Delivery Date	Operational Date
Den-Centenial, CO	VOR	90,200	8/88	12/88

b. Provide Very High Frequency Omnidirectional Range/Very High Frequency Omnidirectional Range and Tactical Air Navigation In-Service Engineering

Locations	Equipment	Cost	Delivery Date	Operational Date
Various Locations	N/A	690,000	N/A	N/A

c. Very High Frequency Omnidirectional Range Improvement

Locations	Equipment	Cost	Delivery Date	Operational Date
Norfolk, NE	VOR/DME	56,100	12/87	4/88
Olathe, KS	VOR/DME	56,100	2/88	6/88
Columbus, NE	VOR/DME	56,100	3/88	7/88
Hastings, NE	VOR/DME	56,100	1/88	5/88
Alliance, NE	VOR/DME	56,100	6/88	10/88
Kaiser, MO	VOR/DME	56,100	4/88	8/88
McCook, NE	VOR/DME	56,100	12/87	3/88

d. Convert Very High Frequency Omnidirectional Range and Tactical Air Navigation to High Altitude Facility

Location	Equipment	Cost	Delivery Date	Operational Date
Hugo, CO	VOR/TACAN	35,900	N/A	2/88

Total Items 3a through 3d $1,799,400

4. Replace Tactical Air Navigation Antennas

Locations	Equipment	Cost	Delivery Date	Operational Date
FAA Depot, OK	Antenna	125,000	4/90	6/90
FAA Academy, OK	Antenna	125,400	4/90	6/90
Sacramento, CA	Antenna	157,600	4/90	7/90
Chester, MA	Antenna	157,600	6/90	9/90
Wausau, WI	Antenna	157,600	5/90	8/90
Humble, TX	Antenna	157,600	7/90	10/90
Santa Rosa, NM	Antenna	157,600	6/90	9/90
Uvalde, TX	Antenna	157,600	8/90	11/90
Dryer, OH	Antenna	157,600	8/90	11/90
Chemult, OR	Antenna	157,600	4/90	7/90
Twin Falls, ID	Antenna	157,600	8/90	11/90
Laughlin AFB, TX	Antenna	157,600	5/90	8/90
Houston-Hobby, TX	Antenna	157,600	6/90	9/90
New Orleans, LA	Antenna	157,600	4/90	7/90
Riverton, WY	Antenna	157,600	4/90	7/90
Plattsburgh, NY	Antenna	157,600	8/90	11/90
Pine Bluff, AR	Antenna	157,600	5/90	8/90
Augusta, ME	Antenna	157,600	6/90	9/90
Magic Reservoir, ID	Antenna	157,600	8/90	11/90
Terra Haute, IN	Antenna	157,600	11/90	7/90
Badger, WI	Antenna	157,600	8/90	11/90
Windsor Locks, CT	Antenna	157,600	5/90	8/90
Minneapolis, MN	Antenna	157,600	6/90	9/90
Tucson (New), AZ	Antenna	157,600	4/90	7/90
Dells, WI	Antenna	157,600	5/90	8/90
Harrisburg, PA	Antenna	157,600	8/90	11/90
Oklahoma City, OK	Antenna	157,600	4/90	7/90
Bimini, BH	Antenna	157,600	6/90	9/90
South Kauai, HI	Antenna	157,600	5/90	8/90
	Total Cost	$4,505,600		

Total Items 1, 2, 3, and 4 $17,325,300

MLS CONTRACT

Question. Why has Hazeltine experienced such significant software development problems?

Answer. The MLS is not technically complex compared to other computer systems, but Hazeltine did not use good top down software development procedures. Hazeltine's design allocation required more software functions in lieu of hardware. Hazeltine did not properly staff at the onset of the contract for the required effort. Some delays are attributed to lack of experienced software personnel.

Question. Has Hazeltine paid any penalty costs for non delivery? If so, how much? And, is that the maximum penalty under the contract?

Answer. Hazeltine to date has not paid any contract penalty costs for non delivery. The liquidated damages provisions of the Contract began accruing May 12, 1987. Maximum penalty is $3,148 per MLS. Total liquidated damages not to exceed $400,050.

Question. Please explain for the record how the amount of liquidated damages under the MLS contract was determined.

Answer. The liquidated damages under the MLS contract were determined by estimating the inefficiencies caused by a rescheduling of field work forces. The liquidated damages are computed as follows:

Month	Calendar-day Rate Per System		Average Calendar Days Per Mo.	Maximum Monthly Asesssment Per MLS
1	$33.50	x	30	=$ 1005
2	21.66	x	30	=$ 650
3	15.70	x	30	=$ 471
4	12.80	x	30	=$ 384
5	11.53	x	30	=$ 346
6	9.73	x	30	=$ 292
			Total:	$ 3,148

The maximum liquidated damages under the terms of the contract is $400,050.

Question. Is Hazeltine bearing all additional costs associated with this delay?

Answer. Since this is a firm fixed price contract, Hazeltine bears all additional costs associated with the schedule delay. Under the liquidated damages provision, the contract cost to the Government will be reduced by a set schedule.

Question. Will the government pay any of this amount?

Answer. The government will not pay any additional costs resulting from schedule delays. The government will be compensated for internal costs associated with delays from the liquidated damages provision.

Question. Please provide for the record a summary of the terms of the Hazeltine MLS contract including amount, delivery schedule, and an explanation of the cost and time delay of each change order.

Answer. The following is a Summary of the terms of the original Hazeltine contract.

-172 MLS Equipments - $76,682,882

-36 MLS Equipments (Option) - $13,913,115

-Equipment Delivery (Start) - 7/12/85

-Equipment Delivery (Complete) - 11/12/88

The equipment costs include; hardware, turnkey construction/installation, documentation, spare parts, engineering support services, and training.

The following tabulation summarizes the terms of each change order under the Hazeltine MLS contract.

Modification #	Description	Cost	Schedule
0001	Exercise of Training option	$920,732	No schedule impact
0002	Minor changes to MLS locations	0	No schedule impact option
0003	Exercise of additional training services	$236,606	No schedule impact
0004	Minor changes to contract Article XXVII, Cancellation Dates and Ceilings - Availability of Funds	0	
0005	Modification revising Contract Terms and Conditions and Contract Schedule a) Revise Supplies or Services and Prices First Program Year b) Revise Applicable Documents and Specifications c) Revise Equipment Specifications d) Revise Delivery Installation schedule e) Make minor revisions to other various Contract Articles (Articles V, X, XVII, XXI, XXXI)	0	Basic schedule slip of 9 months (First network) installation from 1/12/86 to 10/12/86)

Modification #	Description	Cost	Schedule
	f) Add "Liquidated Damages "clause (Article XXXVIII)		
	g) Add "Incentive Subcontracting Program for Small Business and Small Disadvantaged Business" clause (Article XXXIX).		
	(Copy of Contract Modification attached)		
0006	Funding of Third Program Year of multi-year (4 year) buy	$22,775,062	No schedule impact
0007	Minor changes to MLS locations	0	No schedule impact
0008	Minor Specification Changes (FAA-E-2721/1a, 2a, 3b)	0	No schedule impact
0009	Funding of Fourth Program year of multi-year (4 year) buy	$23,026,921	No schedule impact
0010	Changes to Dedicated Repair Service (DRS) requirements under contract Article X	0	No schedule impact
0011	Minor changes to MLS locations	0	No schedule impact
0012	Changes to MLS locations	$49,914	No schedule impact
0013	Minor specification changes (FAA-E-2721/4b). Providing Government Furnished Equipment	0	No scheudle impact

Question. Will Hazeltine do any operational testing in the field prior to installing the first MLS? If not, why not?

Answer. MLS was tested against operational requirements for several years during the R&D phase. Production MLS's which meet operational requirments are commissioned today. Hazeltine will conduct formal first article testing prior to delivery. These test will be conducted in an actual operational environment before the government accepts delivery of the first system.

Question. What percentage of eligible aircraft do you project will be equipped to use MLS in the early 1990's?

Answer. There is currently no projection which specifically address this issue. Aircraft equipage will be a function of ground system deployments. Very conservative projections were assumed in the benefit/cost study as follows.

% EQUIPPPED WITH MLS

YEAR	AIR CARRIER	AIR TAXI	GENERAL AVIATION
1988	0%	.02%	.02%
1990	0%	. 8%	. 8%
1995	20%	4%	4%
2000	100%	41%	41%
2005	100%	100%	100%

Question. Why is it necessary to proceed with a full scale MLS conversion program?

Answer. The preliminary results from the recent MLS Cost Benefit analysis update show that the MLS incremental costs for the FAA and the users amount to $1.79 billion (cumulative discounted 1987 dollars). The benefits derived from MLS represent $4.4 billion. This yields a benefit to cost ratio of 2.5. In addition to those considerations, it makes little sense to maintain a dual ILS/MLS system from an operational standpoint for both the FAA and the aircraft operators. The FAA has subscribed to the ICAO adoption of MLS as the international landing system for its international gateways. The coexistence of ILS and MLS at international and domestic airports could create a severe limitation on the deployment flexibility of aircraft operators. A dual MLS/ILS system would impose a severe cost burden on many operators of aircraft. Some aircraft operators, primarily general aviation, cannot physically install both systems in their aircraft and would therefore loose the additional safety characteristic inherent in a precision approach at many sites if not equipped with the appropriate avionics.

Question. What improvements in reliability have resulted from changing tube-type to solid state ILSs?

Answer. Facility and Service Outage Report data for FY-86 was used to make a direct comparison of tube-type and solid state outage and equipment failures.

ILS Localizer	Tube-Type	Mark 2F
MTBO (All unscheduled)	3,365 hrs.	5,681 hrs.
MTBF (Equipment only)	6,556 hrs.	10,466 hrs.
ILS Glide Slope		
MTBO (All unscheduled	2,804 hrs.	6,720 hrs.
MTBF (Equipment only)	5,470 hrs.	14,043 hrs.

The Mean Time Between Outages (MTBO) data includes all unscheduled outages, many of which are weather induced.

Question. Does the reliability of the solid state ILS systems satisfy FAAs precision landing system operational and reliability requirements?

Answer. In order to meet the FAA maintenance requirement of 90% confidence for one maintenance visit in 90 days, approximate 20,500 hours MTBF (Mean Time Between Failures) and MTBO must be achieved.

Although significant improvement has resulted from changing tube-type to solid state, achievement of the 90% confidence for 90 day maintenance visits does not appear to be realistic with ILS.

Question. Of the 1,250 MLS sites designated in the NAS plan, at what locations could you not site an ILS?

Answer. A site by site analysis has not been accomplished for each of the 1250 designated MLS sites, however, data has been compiled relative to existing ILS Localizer and glide slope facilities.

As of March 31, 1987, there were 957 ILS localizers and 781 ILS glide slopes maintained by the FAA. In an April 12, 1987 report prepared by FAA for GAO on restricted facilities, 63 localizers and 38 glides are shown as not meeting all established tolerances during flight inspection. Of these restrictions, 4 are on Cat II facilities and 1 is on a Cat III facility.

A number of these restrictions are in the outer portion of the usable coverage area, however, 29 localizer and 30 glide slope restrictions are in the area close to the runway.

Although ILS facilities have been installed at practically all designated locations, many have been done at great expense for site preparation or specialized equipment. With most of the prime sites already taken, we expect the installation cost of future ILS to increase greatly.

Question. And what assurances do you have that you can site MLS ground units at these locations?

Answer. Experience has shown that MLS can be expected to alleviate most site problems. We have been able to site MLS at all attempted locations, some of which could not be served by ILS. Expensive site preparation is not required for MLS installations.

Question: Please provide for the record a complete listing of those 222 runways approved in 1982, and explain what type of landing system will be provided in each instance, when it will be installed, and who will pay for it.

Answer: The information follows:

STATE	LOCATION	RUNWAY	NOTE
AK	Birchwood	19	2
AL	Birmingham	23	1
AL	Huntsville	18L	2
AL	Selma	32	3
AR	Fort Smith	07	1
AR	West Memphis	17	2
AZ	Phoenix	26R	1
CA	Fresno	11L	2
CA	Mammoth Lakes	27	3
CA	Red Bluff	33	3
CA	San Diego	27	1
CA	San Francisco	10R	3
CA	Santa Ana	01L	2
FL	Crestview	17	2
FL	Fort Lauderdale	27R	2
FL	Jacksonville	25	2
FL	Marianna	36R	3
GA	Athens	09	3
GA	Augusta	10	3
GA	Columbus	23	2
GA	LaGrange	31	3
GA	Lawrenceville	25	2
GA	Savannah	36	2
IA	Des Moines	05	3
IA	Iowa City	35	3
IL	Aurora	09	2
IL	Chicago (Midway)	31L	2
IL	Peoria	22	2
IN	Eagle Creek	21	2
IN	Indianapolis	04R	3
KS	Dodge City	32	3
KS	Topeka (Forbes)	13	2
KS	Topeka (Municipal)	31	2
KS	Wichita	19L	2
KY	London	05	3
LA	Baton Rouge	31	2
LA	New Orleans	19	1
MA	Bedford	29	2
MA	Beverly	16	2

STATE	LOCATION	RUNWAY	NOTE
MA	Marthas Vineyard	06	2
MA	Nantucket	06	2
MA	Westfield	02	2
MA	Worcester	29	3
MI	Detroit (Metro)	09	2
MI	Detroit (Willow Run)	23L	2
MI	Fremont	18	3
MI	Manistee	27	3
MI	Port Huron	04	3
MI	Traverse City	36	3
MN	Airlake	29	2
MN	Bemidji	31	2
MN	Minneapolis	11L	2
MN	Thief River Falls	31	2
MO	Chesterfield	25	3
MO	Kansas City DT	03	1
MO	Kansas City Intl	27	1
MO	Springfield	13	3
MS	Meridan	19	3
MS	Tupelo	36	2
MT	Billings	27R	2
NC	Charlotte	18L	2
NC	Monroe	05	3
ND	Dickenson	32	2
ND	Fargo	17	2
NE	Chadron	02	2
NE	Hastings	14	3
NE	McCook	12	2
NE	Omaha EPP	17	2
NH	Laconia	08	1
NH	Manchester	17	2
NJ	Atlantic City Mun.	11	2
NJ	Caldwell	22	2
NJ	Morristown	05	2
NM	Cavern City	03	2
NV	Ely	18	2
NV	Henderson	36	3
NV	Las Vegas	19L	1
NV	Reno	34	1
NY	Brookhaven	24	3
NY	Syracuse	14	1
NY	Syracuse	32	2
OH	Akron Canton	14	3
OH	Akron Canton	05	3
OH	Cleveland Hopkins	36L	2
OH	Cleveland Hopkins	18R	2
OH	Columbus Port	28R	2
OH	Dayton Gen	20	2
OH	Dayton Muni	06R	2
OH	Taledo Exress	34	3
OH	Toledo Metcalf	32	3

STATE	LOCATION	RUNWAY	NOTE
OK	Oklahoma City WR	35L	2
OK	Tulsa Jones	36L	2
OR	Corvallis	17	2
PA	Bradford	14	3
PA	Montgomery Co	06	3
SD	Huron	30	2
TN	Bristol	04	3
TX	Amarillo	22	2
TX	Dallas/Ft. Worth	13R	2
TX	El Paso	26L	3
TX	Houston Hobby	22	3
TX	Houston Hobby	31L	3
TX	McKinney	35	3
UT	Cedar City	20	2
VA	Newport News	25	2
VT	Springfield	05	1
WA	Renton	15	1
WA	Seattle Tacoma	16L	2
WA	Spokane Felts	21R	1
WI	Green Bay	24L	3
WI	Manitowac	17	2
WI	Milwaukee Timm	15L	2
MV	Charleston	05	2
AL	Anniston	05	2
AL	Auburn	28	3
AR	Eldorado	04	3
AZ	Casa Grande	05	2
AZ	Flagstaff	21	1
AZ	Grand Canyon	03	2
CA	Eureka	11	3
CA	Fullerton	24	2
CA	Laverne	26	2
CA	Monterey	28	2
CA	Napa	36	2
CA	Torrance	29R	2
CA	Ukiah	15	2
CO	Durango	02	2
CO	Greely	09	2
CT	Hartford	02	2
FL	Ft. Lauderdale	09R	2
FL	Ft. Lauderdale EX	08	2
FL	Ft. Myers	05	2
FL	Miami	12	2
FL	Sarasota	13	3
FL	Tallahassee	27L	2
FL	Tampa	18R	2
GA	Atlanta	08/26	2
GA	Marietta	27	2
GA	Savannah	27	2
GA	Waycross	18	2
HI	Kihue-Kauai	35	2

STATE	LOCATION	RUNWAY	NOTE
IA	Clinton	03	2
IA	Davenport	14	2
IA	Sioux City	13	2
IL	Peoria	12	3
IL	Waukegan	23	2
IN	Evansville	04	2
IN	Indianapolis	13	2
IN	Mt. Comfort	25	2
IN	Valparaiso	27	2
KS	Coodland	30	2
KS	Hays	34	2
KS	Wichita	01L	2
LA	Houma	17	1
LA	Monroe	22	2
MA	Beverly	16	2
MA	Hyannis	15	2
MA	Lawrence	05	2
MA	New Bedford	23	2
ME	Augusta	17	2
ME	Bangor	15	2
ME	Bar Harbor	22	2
ME	Rockland	03	2
ME	Waterville	05	2
MI	Ironwood	27	2
MI	Muskegon	24	2
IM	Saginaw	23	2
MN	Brainerd	23	2
MN	Flying Cloud	09R	2
MN	Mankato	33	2
MO	Richards-Gebaur AFB	36	3
MS	Greenwood	18	2
MS	Jackson Hawkins	16	2
MT	Butte	15	2
MC	Ashville	16	2
NC	Charlotte	36	2
ND	Bismark	13	2
ND	Williston	29	2
NE	Lincoln	17R	2
NH	Concord	35	2
NH	Lebanon	18	1
NJ	Millville	10	2
NJ	Toms River	06	2
NM	Clovis	21	2
NV	Elko	23	1
NY	Batavia	28	2
NY	Elmira	06	2
NY	Olean	22	2
NY	Oneonta	24	2
NY	Plattsburg	01	2
NY	Schenectady	04	2
OH	Akron Canton	19	2

STATE	LOCATION	RUNWAY	NOTE
OH	Akron Canton	19	2
OK	Ardmore	30	2
OK	Norman	03	2
OR	Astoria	25	2
PA	Butler	07	3
PA	Meadville	25	2
PA	Middletown	31	2
PA	Philadelphia	17	1
PA	Pittsburgh GPB	10R	1
PA	St. Marys	28	2
RI	Westerly St	07	2
SC	Greer	21	1
SD	Yankton	31	2
TN	Knoxville DT	26	2
TN	Memphis	27	1
TT	Obyan Saipan	07	2
TX	Alice	31	2
TX	Corpus Christi	31	2
TX	Kileen	01	2
TX	Tyler	22	3
VA	Manassas	16L	2
WA	Arlington	33	2
WA	Bellingham	16	2
WA	Richland	19	2
WA	Spokane	03	1
WI	Waukesha	10	2
WV	Huntington	30	2
WY	Riverton	28	2

NOTES:

1. Locations contained in first production contract.
2. Locations are qualified for MLS and will be considered in future procurement contracts.
3. Locations are not qualified.

Installation dates are contingent upon equipment delivery. The first system is estimated to be installed in March 1988. These systems are funded by the Facilities and Equipment appropriation.

Question. According to GAO, when adding the cost of MLS to DOD, FAA, and the users, its projected cost approaches $4 billion but benefits do not appear to approach this figure. What is your latest calculation of MLS costs and benefits?

Answer. The preliminary results from the recent MLS Cost Benefit analysis update show that the MLS incremental costs for the FAA and the users amount to $1.79 billion (cumulative discounted 1987 dollars). The benefits derived from MLS represent $4.4 billion. This yields a benefit to cost ratio of 2.5.

In addition to those considerations, it makes little sense to maintain a dual ILS/MLS system from an operational standpoint for both the FAA and the aircraft operators. The FAA has subscribed to the ICAO adoption of MLS as the international landing system for its international gateways. The coexistence of ILS and MLS at international and domestic airports could create a severe limitation on the deployment flexibility of aircraft operators. A dual MLS/ILS system would impose a severe cost burden on many operators of aircraft. Some aircraft operators, primarily general aviation, cannot physically install both systems in their aircraft and would therefore loose the additional safety characteristic inherent in a precision approach at many sites if not equipped with the appropriate avionics.

The committee is informed that you have been conducting an update of your MLS vs. ILS cost-benefit study.

Question. When will the new update be completed?

Answer. The final report on the updated cost-benefit study will be completed in July 1987. Preliminary results are available and confirm our earlier study that clearly shows that MLS is cost beneficial. This study update has taken into account all of the GAO concerns. Remaining work after July will focus on additional benefit categories which are expected to make the benefit to cost ratios even more favorable to MLS. Results of the additional work are expected in December 1987.

Question. Will the cost-benefit update take into consideration concerns expressed by GAO in its January 1987 letter to FAA?

Answer. The Cost Benefit analysis update addresses each concern expressed by GAO in a very specific manner.

PASSENGER TIME SAVINGS

The GAO expressed concern over the FAA's policy of evaluating passenger time savings (delay reduction) at one times the hourly wage rate and using all increments of time saved in determining the passenger time benefits of MLS. This valuation is considered conservative in light of the concern shown by the flying public for the delays in the airspace system. This policy on evaluating passenger time savings is based on outside studies in the 1970s that were used to support the 1976 MLS Cost Benefit Study. Current studies would suggest valuing passenger time at multiples of the hourly rate for segments of the passenger community. For example a National Business Aircraft Association study published in "Business and Commercial Aviation", June 1986, page 64, cites data that would justify a multiple of hourly rates for evaluating time. The update to the MLS Cost Benefit Study addresses the passenger value of time issue in a sensitivity analysis. The update holds the passenger value constant at one times the hourly rate and examines the benefits if passenger time benefit is zero (least benefit) if very small increments of passenger time benefits are excluded (most likely benefit) and if all increments of passenger time beneifts are evaluated (largest benefit). The passenger time sensitivity analysis, coupled with the total study, presents a fair treatment of this issue.

OTHER BENEFIT ASSUMPTIONS

The MLS Cost Benefit Study update validates the curved approach benefit on a runway by runway basis. The study looks at the availability of radar, the direction of traffic flow with respect to the runway, the instrument landing procedures now in effect at the runway, the speed of the different categories of aircraft and a geographic construct of the likely MLS approaches to bound the benefits derived from a curved approach.

GAO has expressed concern at using ILS versus MLS outage data to support MLS benefits due to the ILS operational availability gains resulting from the recent transition to solid date ILS equipment. The preliminary update to the MLS Cost Benefit Study found MLS cost beneficial without considering benefits for reduced outages. The final report will include this benefit category using actual current ILS outage data and MLS projected reliability data.

The GAO concern that ground delays at one JFK runway were used as a major justification for MLS is not an issue in the update. The MLS Cost Benefit Study update considers incremental benefits of MLS versus ILS at each proposed MLS runway based on that runway's characteristics.

COLLOCATION OF MLS AND ILS SYSTEMS

The collocation of MLS and ILS is an issue considered in the study update. Collocation is required to build the "bridge" for users to switch from ILS to MLS and to adhere to ICAO/MLS Transition Schedule. The collocation costs and benefits have been evaluated on a runway specific basis. A reduction of the collocation period could adversely affect airspace users as the users would have to bear the cost of dual (ILS and MLS) systems and most aircraft have weight and space limitations that limit dual equipage. The MLS plan is cost beneficial with the current transition strategy, which calls for the first ILS decommissioning in the late 1990s consistent with ICAO standards, and a planning horizon of 20 years after the last MLS installation (2020). The study update keys the user transition to MLS to the ground unit deployment. The user benefits and costs are built up based on the age of aircraft in the user fleet, the age of avionics, location of based aircraft in the user fleet, the age of avionics, location of based aircraft, flight route patterns, fleet forecasts, current avionics costs, technology improvement factors and PRICE model projections.

DATA CURRENCY

The data used in the MLS Cost Benefit Study Update is the most current data available as of January 1987.

Question. How many total systems are assumed in the update?

Answer. The Cost Benefit study update addresses the MLS program in phases and in its entirety. First, the replacement program of 739 ILS runways is examined. Second, the expansion to 1250 MLS systems is analyzed, where 1226 runways are in commercial use, the remainder being installed at support installations (FAA Depot, etc.). This quantity of MLS installations covers the first, second and third buys. Thirdly, the update is presently being expanded to consider 1373 runways that qualify for MLS by the year 2000.

Question. What are the preliminary results of the new update?

Answer. The new update to the MLS cost benefit study shows a Benefit/Cost ratio of 2.5. The sensitivity analysis shows that the Benefit/Cost ratio can vary from a low of 1.3 to a height of 3.7 depending upon the assumptions made.

Question. What are the primary MLS benefits that are valued in the current update and generally how was it determined how often these benefits would occur?

Answer. The preliminary MLS benefit categories analyzed in the current update are the following:

a. The lowering of landing weather minima allowed by the improved accuracy of the MLS signal. This results in a decrease of flight diversions and cancellations due to weather conditions and benefits the aircraft operators through reduced aircraft operating costs, averted diversion costs, and passenger time savings.

b. The improvement of the Air Traffic Control system as a whole as a result of the reduced radar vectoring required in the terminal radar environment due to the capabilities of MLS. The reduction in average ATC service time (radio communications) will reduce Air Traffic personnel's workload and therefore will reduce the average delay per aircraft in the system (approaches, departures and overs).

c. The time and operating cost savings generated by the MLS curved approach capability in non-radar environment. Savings range from 0.6 to 4.7 minutes per approach depending on geometry and direction of incoming flight with respect to the orientation of the runway, and approach speed category.

d. The time and operating costs savings generated by the DME arc approach capability in non-radar environment with aircraft not equipped with Area navigation avionics. Savings range from 0.2 to 3.1 minutes per approach depending on geometry and direction of incoming flight with respect to the orientation of the runway, and approach speed category.

e. The time and operating savings generated by shortened path capability provided by MLS. Savings range between 2 and 4 minutes per approach based on NASA Ames simulation of the NY terminal area.

f. The non-precision landing benefits provided by MLS at neighboring runways or airports lying within the area coverage of the primary MLS signal. The benefits are averted diversions with the resulting time and cost savings to the aircraft operators as lower landing minima are generated by the MLS.

In the original 1980 and updated 1983 cost/benefit studies, 44 percent of the benefits were attributed to passenger time savings. OMB has questioned valuing passenger time savings. Also, in response to a December 1986 GAO report on FAA's procurement of Airport Surface Detection Equipment (GAO/RCED-87-18) in which GAO said the improvements could be made in FAA's value of passenger time savings methodology, DOT stated that FAA planned to conduct a study on ways to improve cost-benefit methodologies for the measurement and valuation of passenger time savings.

Question. Given OMB's position, GAO's suggested improvements, and FAA's planned study, how are passenger time savings valued in the current study?

Answer. The FAA study on passenger time valuation was not complete for use in this study; therefore, a very conservative procedure was used to value passenger time. GAO expressed concern over the FAA's policy of evaluating passenger time savings (delay reduction) at one times the hourly wage rate and using all increments of time saved in determining the passenger time benefits of MLS. This valuation is considered conservative in light of the concern shown by the flying public for the delays in the airspace system. This policy on evaluating passenger time savings is based on outside studies in the 1970s that were used to support the 1980 MLS Cost Benefit Study. Current outside studies would suggest valuing passenger time at multiples of the hourly rate for segments of the passenger community. For example a National Business Aircraft Association study published in "Business and Commerical Aviation", June 1986, page 64, cites data that would justify a multiple of hourly rates for evaluating time. The update to the MLS Cost Benefit Study addresses the passenger value of time issue in a sensitivity analysis. The update holds the passenger value constant at one times the hourly rate and examines the benefits if passenger time benefit is zero (least benefit) if very small increments of passenger time benefits are excluded (most likely benefit) and if all increments of passenger time benefits are evaluated (largest benefit). The passenger time sensitivity analysis, coupled with the total study, presents a fair treatment of this issue considering OMB's postion and GAO concerns. Preliminary results of the MLS cost benefit study show MLS to be cost beneficial without using passenger value of time.

One of the larger costs connected with MLS aircraft equipment, is the cost of certifying the aircraft and equipment to FAA requirements.

Question. Since commercial equipment has not been certified, what basis for the certification cost was used in the study?

Answer. Aircraft manufacturers typically include an allocated portion of the certification costs in the purchase price of aircraft. For major airliners, MLS certification costs will run into millions of dollars to certify the equipment to Category IIIC standards (landing under 0-foot visibility and 0-foot decision height).

Unit price increases due to MLS certificaiton will amount to tens of thousands of dollars per machine after allocation of the cost of the entire aircraft line production.

For air carriers, commutes and air taxis, the increase in cost represents between 0.1 to 1 percent of the purchase price at the most. For general aviation this percentage could be higher.

For the purpose of the MLS study update, the price of MLS avionics has been increased by 10 percent compare to the current ILS equipment it replaces, all other factors being equal such as production rates and quantities, etc. reducing the ILS channel separation will cause an increase in new ILS avionics.

Question. On what basis and when does the study assume the user community will equip with MLS, and how does this affect the amount of benefits attributed to MLS?

Answer. The study assumes varying rates of equipage for air carriers, air taxis (category of for hire passenger carriers that are not air carriers) and general aviation. The equipage scenario does not affect the amount of benefits, it affects the timing of the benefits with respect to the cost of the MLS and the benefit/cost ratio. The air carrier equipage assumption was based on discussions with air carriers that indicated they would not equip their aircraft with MLS until MLS facilities were available at every airport that their aircraft flys to. They also indicated that a "D" check that occurs at approximate 5 year intervals was when they would replace ILS with MLS on the aircraft to avoid additional out of service time for the aircraft. The scenario for air carrier equipage was then to determine MLS/ILS parity (when every airport that now has ILS will have at least one runway equipped with MLS) and consider equipage over a 5 year period after this date.

Question. Also, how did equipage assumptions vary between commercial air carriers, regional and commuter airlines and general aviation?

Answer. All air carrier equipage is between 1995 and 2000. The air taxi and general aviation communities are considered to equip based on a cluster factor (how many airports are equipped with MLS within 500 miles of their home base). These users equip between 1988 and 2004. The table below illustrates the equipage:

		% EQUIPPPED WITH MLS	
YEAR	AIR CARRIER	AIR TAXI	GENERAL AVIATION
1988	0%	.02%	.02%
1990	0%	. 8%	. 8%
1995	20%	4%	4%
2000	100%	41%	41%
2005	100%	100%	100%

Some aviation users think MLSs curved approach capability, one of its most widely touted benefits, will have limited effect on increasing airport capacity.

Question. Has FAA validated that the curved approach will increase airport capacity? If so, where and by how much?

Answer. The traditional concept of an MLS curved approach reducing the aircraft flight path on an approach which would shorten the aircrafts time in the system and increase airport capacity was found not to be a major factor in the most recent study. This concept of an MLS curved approach is only valid at airports without radar service. At an airport with radar service the aircraft follow similar short paths with radar guidance. The airports without radar service tend to be low volume sites without capacity problems. The benefit here is reduced aircraft flight time of from 0.6 to 3.4 minutes due to the shortened path. There is, however, a function of the MLS curved approach that effectively increases airport capacity. In the radar environment MLS will allow an aircraft to fly a designed approach path with reduced radar vectoring. This will reduce controller workload from 10 to 20%. If the number of controllers remains constant and air traffic stays constant or grows, this will increase the capacity of air traffic control at an airport with MLS effectively reducing air traffic control imposed delays in the terminal in question. The delay reduction will be seen by all air traffic (arrivals, departures, transient and secondary airports) in these control areas. The MLS curved approach in non-radar areas accounts for 9% of the total MLS benefits. The effect of MLS curved approach on air traffic control system accounts for 14% of MLS benefits through reduced delays.

AIR FACILITIES

You are requesting $15.072 million to modernize and improve various airway facilities. Over the past five years, this appropriation has averaged about $5 million per year.

Question. Why do you propose tripling this account in fiscal year 1988?

Answer. The original plan for this program called for higher dollar requests prior to FY 1988. Budget decisions resulted in deferral of part of the requests. The program levels have been adjusted to cover additional projects needed during the extended five year plan timeframe. Also, a new program has been added to cover earthquake hazard analysis and correction.

Question. Please provide for the record a breakdown of your special needs for this account (budget item no.5b(2)) that justifies the large increase in appropriations for fiscal year 1988. Please also provide an estimate of obligations that can be made in fiscal year 1988 against this appropriation.

Answer. The breakdown of the program is:

$9.405 million	Refurbish air navigation/air traffic control facilities
2.000	OSHA projects at ATCTs
2.500	Engineering support for assessment of buildings for earthquake induced hazards
1.167	Safety climbing devices, frequency interference measuring equipment, etc.
$15.072 million	

We plan to obligate $12 million of the FY 1988 funds in FY 1988 with the remainder being obligated in FY 1989.

COMPUTER UPGRADES

Question. Do you plan to acquire off-the-shelf equipment to satisfy your needs? How much risk is involved in this procurement?

Answer. FAA has a large diversity of centralized computer sytems. Diversity means non-standardization which means higher unit cost of service. To meet the problem of non-standardization and to allow FAA computer capacity to grow when needed, an alternative approach to acquiring computer capacity has been taken. The agency is planning to go to vendors with a functional requirement for computer capacity over a 10-year period that will allow them to invest and provide service at the lowest possible cost. This procurement of total services rather than just computer hardware and software will use state-of-the-art, off-the-shelf technology. Although a major acquisition, other organizations including Department of Defense and a number of private organizations, have conducted similar procurements with positive results. We believe the risk involved to be manageable.

Question. Have you looked at other options besides procuring new computer equipment?

Answer. Yes, other options have been reviewed and found not feasible. Although, we are not necessarily procuring equipment, we are asking industry to provide a service--computing power. This option provides the quality of service needed, permits maximum use of the ADP technologies, and does not require increase in governmental personnel.

Question. For instance, could you use excess capacity from the new Host computer at the centers; or could the Department's TCC facility be used for some of this work?

Answer. The computer operating environments found at enroute centers are not compatible with existing software, nor do they have adequate capacity. These computers have been reserved for air traffic separation requirements and cannot be encumbered with general purpose computer activities. The Department's TCC facility does not have adequate capacity. This acquisition is planned to replace existing FAA computer facilties and to provide for the absorption of other DOT computer facilities, including the TCC, if that direction is determined to be economical.

MAINTENANCE CONTROL CENTERS

Last year your budget indicated that the Fiscal Year 1987 appropriation of $5.5 million would be the final appropriation necessary for the MCC program. This year the total cost has jumped from $11 million to $46.02 million.

Question. Please provide a detailed justification of this $35 million cost increase for the record.

Answer. The initial program included only a SMMC replacement at each ARTCC, with an estimated cost of $16.0 million. The program was expanded to include NAS technical baseline requirements for GNAS and end-state MCC requirements at each ARTCC. The expansion was previously included in the post Fiscal Year 1992 period. This effort was brought forward due to urgent mission needs.

The increasing complexity of NAS equipment at the ARTCC and work force consolidation throughout the GNAS sectors will place additional demands on the Airway Facilities organization in maintaining the customary high-level of service. The end-state MCC capabilities would enable meeting these additional demands with fewer total personnel than would otherwise be required.

SEI CONTRACT

You are requesting $103.2 million for systems engineering and integration support. Of this amount, $89 million is for the SEI contractor -- Martin Marietta -- and $14.2 million is for SEI support contractors.

Question. How many staff years would be supported by your $103.2 million request -- broken down for both Martin Marietta and support contractors?

Answer. The total FY 88 funding for the SEI contractor is made up of $89 million for the basic contract; funding from a contract modification to support the Advanced Automation Program (AAP) in the amount of $13.8 million; and funding from a pending contract modification for additional project support which is estimated to be $20.8 million; resulting in total FY 88 SEI contract funding of $123.6 million. These combined funds of $123.6 million will provide a planned staffing of approximately 1,249 for FY 88. The $14.2 million is primarily comprised of the Mitre Corporation support of the FAA NAS planning and is not related to the SEI contract.

Question. Please provide for the record an SEI staffing table. Please show separate breakdowns for Martin Marietta and each subcontractor (by name). Please also indicate whether your numbers are EOY staff years o~~f~~r FTEs.

Answer.

Total SEI Staffing

Fiscal Year	Baseline estimate	Previous 1/ estimate	current 1/ estimate	Variance from previous est
1984	287	333 2/	333	0
1985	490	736 2/	736	0
1986	799	1,063 2/	1,063	0
1987	997	1,200	1,140	-60
1988	1,056	1,270	1,249	-21
1989	1,072	1,201	1,165	-36
1990	970	1,112	1,082	-30
1991	872	958	917	-41
1992	733	800	744	-56
1993	530	595	563	-32
1994	452	496	469	-27

The changes in FY 1987 and FY 1988 staffing reflect minor adjustments for anticipated funding. Outyear staffing estimates, in the option years of the contract, are based on projected requirements, labor rates, and budgets. Changes from the previous estimate are the result of cost estimating adjustments and not contractual modifications or actions.

FY 1988 SEI Staffing - Detailed

Martin Marietta	729
ARINC Research Corp.	105
BTG, Inc.	35
LOGICON, Inc.	95
RM PARSONS	100
Systems Control Technology	50
Standford Telecommunications, Inc.	60
Miscellaneous	75

The staffing information provided is average staffing per year, or FTE. Martin Marietta and subcontractor staffing are subject to change on an annual basis due to the changing priorities in the NAS Plan, as emphasis continues to shift toward the implementation phase of the problem, and can be updated annually if required.

1/ The total SEI staffing numbers include Martin Marietta and subcontractor staffing

2/ Actuals

Question. Please also give us your best estimate as to how many ex-FAA employees are now employed by the SEI, and each subcontractor.

Answer. The total number of former FAA employees working for Martin Marietta, including all subcontractors, hired since contract award in January 1984 is 47, or about 4 percent of the current workforce. The 47 employees are distributed as follows:

Martin Marietta	22
Logicon, Inc.	1
ARINC Research Corp.	2
Systems Control Technology	3
System Requirements Services Association	19

Question. Please also provide for the record a breakdown of SEI and each SEI subcontractor compensation showing the number of employees being paid at different levels.

Answer. There is a great variation in the number and spread of labor grades between Martin Marietta and each of the SEI subcontractors. In order to provide more meaningful information, the subcontractor labor grades and spreads have been normalized to the Martin Marietta standards and combined to give a more complete picture. The information shows FY 87 data indicating current staffing.

	Labor Grade	Number	Percent of Total
Clerical/Administrative	1	1	-
	2	1	-
	3	54	5.0
	4	4	0.5
	5	17	1.0
	6	1	-
	7	4	0.5
Technical/Management	1	16	1.0
	2	72	6.0
	3	151	13.0
	4	240	21.0
	5	25	2.0
	6	270	24.0
	7	77	7.0
	8	80	7.0
	9	75	7.0
	10	52	5.0

Labor rate cost is company restricted information since it effects the companies ability to compete in the market place. This information may not be released without company approval.

Question. Please also provide for the record a summary of personnel benefits paid for under the SEI contract and the average cost per employee.

Answer.

Employee Benefits (1987)

Vacation
Holidays
Pension
Performance Sharing Plan
Insurance
Average cost per employee $15.7K

Question. The negotiated $685 million price of the SEI contract has been increased by contract modifications to about $900 million. Please summarize each contract modification and the cost of each.

Answer. There have been three major contract modifications to date that total approximately $222 million and several very minor modifications that total approximately $2 million. A summary of these modifications is provided below.

Contract Modification	Cost	Description
#4/13	$ 97 million	Provided increased and accelerated project management and technical support for HOST and the Advanced Automation System (AAS).
#10/11	$110 million	Provided technical and project management support to additional NAS Plan projects.
#15	$ 15 million	Provided accelerated implementation and regional support.
Various	$ 2 million	Provided additional technical support and office space in field locations where government space was not available.

EXPLOSIVE DETECTION

Question. You are requesting $9 million to procure explosive detection system. What kind of technology is this and has all necessary R&D been completed for this project? If not, when will it be completed?

Answer. The technology to be procured is thermal neutron activation (TNA). This system will be used to detect explosives in checked baggage and air cargo. The R&D has been completed and two different hardware designs finalized and fabricated. Laboratory testing of the first design is complete. Airport testing of the system will begin in June. Airport testing of the second system will begin late summer. The final decision on hardware design will be made after the operational airport testing.

FLEET CONVERSION

Question. What is the status of your Fleet Conversion Program?

Answer. The contract for 19 Beech Model 300 aircraft was awarded to the Beech Aircraft Corporation in October 1986. Acquisition of the remaining aircraft identified in the fleet conversion plan is deferred.

Question. When will these 19 aircraft be delivered?

Answer. Delivery of the first two aircraft is scheduled for October 1987. Beginning in March 1988, the remaining aircraft will be delivered at a rate of two each month with the final aircraft delivery in December 1988.

Question. Please provide for the record a description of what pieces of equipment included in your request will be installed on what aircraft and how those aircraft were selected. Please also indicate if any of these planes are slated to be replaced under the Fleet Conversion Program, and if so, why this equipment upgrading is necessary.

Answer. The equipment requested is primarily avionic flight control and flight inspection units, the same as will be installed in the new aircraft being procured. Selection of the aircraft to receive this equipment was based on the projected serviceability of the aircraft, our intention to retain it in the fleet, and the mission assignment of the particular aircraft.

Question. Please also list the nine aircraft slated to receive upgraded flight inspection packages and also show the expected service life of each plane. Please explain why this equipment is necessary for any plane with a service life of less than 5 years.

Answer. No installations will be made on aircraft having a service life of less than 5 years. The aircraft designated to receive the upgraded flight inspection packages are: five Sabreliner NA-265-80's, two Convair CV-580's, and two Boeing 727's. The five Sabreliner NA-265-80's have received the service life extension modification which extended the service life to 30,000 hours (20 years), and the other two models of aircraft have no structural service life limitation.

Question: Please provide for the record a summary of FAA's aircraft fleet by type and age. Also estimate the FY 87 cost to maintain aircraft and identify any aircraft in the fleet which are no longer cost-effective to operate.

Answer: The FAA fleet by aircraft make, model, and year of manufacturer is shown below. Estimated cost for fleet maintenance for FY 1987 is $29.7 million. Upon full transition to the Beech 300 flight inspection airplanes now on order, three aircraft models remain in the fleet which do not meet our mission objectives and upon which operating costs are too great. These three models are the Lockheed Jetstar, two Boeing 727's, and five Convair 580's. Several current production aircraft are available on the market which could accomplish the mission objectives of these aircraft with reduced operating costs and a much higher mission readiness rate.

AIRCRAFT TYPE	MF DATE
Lockheed Jetstar L-1329	1960
Boeing B-727/100QC	1968
Boeing B-727/30	1963
McDonnell/Douglas DC-9	1966
Douglas DC-3	1945
Sabreliner NA-265-40 (3 A/C)	1968
Sabreliner NA-265-40	1969
Sabreliner NA-265-80 (7 A/C)	1974
Sabareliner NA-265-80 (8 A/C)	1975
Jet Commander AC-1121 (5 A/C)	1969

AIRCRAFT TYPE	MF DATE
Cessna Citation CE-500	1973
Convair CV-580 (2 A/C)	1956
Convair CV-580 (3 A/C)	1957
Gulfstream I G-159	1965
Gulfstream I G-159	1969
Super King Air BE-200	1975
Aero Commander AC-680	1958
King Air BE-C90 (5 A/C)	1980
Sikorsky S-76	1981
Cessna C-II CE-550	1978
King Air BE-F90 (4 A/C)	1981

Question. What are FAA's plans regarding fleet replacement over the next several fiscal years?

Answer. Over the next several years, the FAA plans to review the requirements and justification for replacement of the aircraft in our original fleet conversion plan which have been deferred.

Question. What missions would be affected?

Answer. The missions affected are the Evaluation, Currency, and Transportation; Flight Inspection; and Research and Development.

Question. What purchase or leasing arrangements would provide the most cost-effective approach as the decision is reached to replace aircraft?

Answer. We will examine both purchase and lease options, and exercise that option which is most advantageous to the Government at the time the proposals are submitted for evaluation.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

NAS PLAN DELAYS

QUESTION. GAO's testimony recommends that congress require the FAA to assure that systems function properly before appropriating further monies for their production.

GAO also recommends that FAA produce a revised NAS Plan with realistic implementation schedules. Do you agree with the GAO?

ANSWER. As identified in the GAO report of March 1987, Aviation Acquisition, many of the management processes for acquisition have already been improved by FAA/DOT. Adherence to these processes is being ensured through increased management attention. For example, an operational test and evaluation (OT&E) plan is established for each major project which considers the unique test requirements of the project, physical and financial practicality, the need to keep the air traffic control system operational during field testing and transition; and urgent need or other schedule considerations. Flexibility in determining OT&E strategy as provided for in A-109, allows implementation of an OT&E strategy tailored to each situation. The results of the OT&E identify a major consideration in the determination of a system's readiness to proceed into production. Additional guidance or oversight is not considered necessary.

We agree that original project schedules were optimistic and the 1987 NAS Plan which will be released in May does contain higher confidence implementation schedules.

NATIONAL AIRSPACE SYSTEM PLAN - IMPLEMENTATION DELAYS

QUESTION. The FAA projects that 36,000 daily flights will transport nearly 2 million passengers by 1997. In 1985, nearly 25,000 daily flights carried an estimated 1 million passengers. The NAS Plan is expected to make this level of traffic growth manageable. However, the $16 billion plan is behind schedule -- 11 of its major component projects are delayed by 1 to 8 years. How do NAS Plan delays affect FAA's efforts to add controllers and improve productivity of its technical staff?

ANSWER. Delays in the NAS Plan projects affecting air traffic productivity improvements have resulted in a need for more controllers through the early 1990's than originally estimated but still fewer than the 1980 level. Total productivity is projected to have increased by 28 percent from the 1980 baseline by FY 1988 and to reach 35 percent by FY 1992. This rate of improvement accelerates in the post 1992 period as the advanced automation system is implemented.

These same delays have also affected the workload improvements for the airway facilities (technical) staff. Although the projected airway facilities maintenance workload requirements are above those originally projected, the FY 1988 workload has decreased 20 percent from the 1980 level. As the remaining NAS Plan projects are implemented, the workload requirements will continue to decrease gradually achieving an 1/3 reduction from 1980 levels by 2000.

AIRPORT AND AIRWAYS TRUST FUND BALANCES

Question. Delays in the NAS Plan may further increase the size of the unused balance in the Plan's funding source -- the Airport and Airway Trust Fund -- which is expected to reach $5.6 billion by the end of FY 1987, and $12.4 billion by the end of 1990.

(This Trust Fund is made up of 8% passenger ticket tax; fuel tax; and international passenger tax.) GAO indicates that none of the Plan's major projects has experienced a shortage of funds -- FAA has just not been able to accomplish as much as it anticipated in 1981, on which the FY 1982/1987 authorizations were based.

Doesn't the high unused balance in the trust fund indicate that FAA should re-think its NAS Plan schedules?

Answer. On February 12, 1987 the Department of Transportation proposed the $10.2 billion be authorized for expenditures from the Aviation Trust Fund in FY 1988 and 1989. That proposal was consistent with implementation of NAS Plan as scheduled -- most systems in place by 1992.

Our proposal for reauthorization of the Federal Aviation programs will reduce the uncommitted balance to $4.9 billion or less by the end of FY 1989.

It is further anticipated that the balance remaining at the end of FY 1989 will be spent to complete the NAS Plan and continued airport grants in subsequent years. We anticipate spending more each year from the fund than will be received in revenues.

ADMINISTRATOR'S LETTER TO GOVERNOR CUOMO ON THE NEED FOR NEW AIRPORTS AND INCREASED AIRPORT CAPACITY

Question. Your letter indicates that there will be an 85% increase in passenger enplanements by the year 2000. Operations by air carriers will rise 30% in the same time. New York is expected to experience more growth than the national average. Unless capacity is increased, FAA expects that by 1996 hours of delay at Kennedy could reach 51,000 (Aircraft) 3,250,000 (Passenger) LaGuardia could reach 56,000 (Aircraft) 2,427,000 (Passenger). What will FAA do to assist in the development of additional capacity at the Nation's busiest airports?

Answer. FAA has over 30 programs underway that impact airport capacity.

- Programs involve new airspace procedures, systems development, and airport development.
- Some of the programs will be operational in 1987 - new converging approach procedures, improved in-trail separation, other airspace procedures, and airport improvements.
- FAA has airport capacity task forces underway at six of the busiest airports to consider site-specific capacity improvements. Locations: San Francisco, Memphis, New York, Miami, St. Louis, Detroit.
- Five additional task forces will be scheduled for FY 1988. Locations: Boston, Phoenix, Salt Lake City, Pittsburgh, and Kansas City.

- FAA is applying two computer models for airport and airspace capacity planning.
- The airspace model (SIMMOD) is being used to restructure airspace and procedures in Air Traffic's West Coast Plan and East Coast Plan - Northern Tier; and the AIRPORT MACHINE was developed as a simulation of airport runway and taxiway operations to be used as a planning tool for studying runway and taxiway design.
- Five new runways were in various stages of completion at the top 30 airports in 1986. Ten more runways are planned at those airports during the next 10 years.
- FAA coordinates airport capacity improvement programs with an Industry Task Force on capacity and delay representing airports, airlines, general aviation, pilots, and other industry representatives.
- FAA Capacity Improvement Programs are compiled into an Airport Capacity Enhancement Plan which was updated May 1, 1987

STATUS OF SYRACUSE HANCOCK FIELD PROJECT

Question: As you know, the U.S. Air Force is in the process of transferring title to a parcel of land at Hancock Field to Onondaga County for industrial development. This parcel is adjacent to Syracuse International Airport which participates in the Federal airport assistance programs administered by the FAA. I would like to be assured that the FAA has no problems which would inhibit the immediate and timely transfer of this land to the county. Can you give me that assurance?

Answer: Prior to the title transfer by the Air Force to Onondaga County the FAA requested that the Air Force include language in the transfer documents which would protect the airport and assure that any use of the parcel would be compatible with the efficient operation of Hancock Field. The FAA has recently received word that language protecting the airport is included in the transfer documents.

Question: What steps, if any, does the FAA still need to take prior to this transfer taking place?

Answer: No further steps by the FAA are necessary prior to the transfer taking place. However, the FAA would recommend that land required for a future parallel runway be made available to the airport when needed (sometime in the mid-1990's).

Question: Please provide me with a brief report on the FAA's interests in this site and in this transfer.

Answer: The FAA interest in this site and this transfer is to assure the continued safe and efficient operation of the Hancock Airport with availability of a portion of the site for future airport expansion. Future development at Hancock includes development of a parallel runway 4,300 feet from the existing Runway 10-28. A parallel runway would provide simultaneous precision instrument operations at the airport. Development of the new runway would require that the airport sponsor (city of Syracuse) acquire a portion of the parcel deeded to the county of Onondaga.

Question: Provide for the record a summary of FAA's aircraft fleet by type and age. Also estimate the FY 87 cost to maintain aircraft and identify any aircraft in the fleet which are no longer cost-effective to operate.

Answer: The FAA fleet by aircraft make, model, and year of manufacturer is shown below. Estimated cost for fleet maintenance for FY 87 is $29.7 million. Upon full transition to the Beech 300 flight inspection airplanes now on order, three aircraft models remain in the fleet which do not meet our mission objectives and upon which operating costs are too great. These three models are the Lockheed Jetstar, two Boeing 727's, and five Convair 580's. Several current production aircraft are available on the market which could accomplish the mission objectives of these aircraft with reduced operating costs and a much higher mission readiness rate.

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Question: What are FAA's plans regarding fleet replacement over the next several fiscal years? What missions would be affected? What purchase or leasing arrangements would provide the most cost-effective approach as the decision is reached to replace aircraft?

Answer: Over the next several years, the FAA plans to review the requirements and justification for replacement of the remaining aircraft not currently included in our original fleet conversion update. The missions affected are the Evaluation, Currency, and Transportation; Flight Inspection; and Research and Development. We will examine both purchase and lease options, and exercise that option which is most advantageous to the Government.

FLIGHT SERVICE STATION QUESTIONS

Question. Will the FSSs slated for closure into Model 1 FSSs in FY 87 be reviewed for possible inclusion as satellite or adjunct stations?

Answer. During our earlier testimony it was stated that a total of 55 FSS consolidations were planned this year, and that number of existing FSS's (currently 259) would be gradually reduced to 51 by fiscal year 1991. We also indicated that all 61 automated flight service stations (AFSS's) will be in operation by that time. We do not anticipate a need for further review of the 55 FSS's in question and expect to consolidate those facilities this fiscal year. The term "adjunct" or "satellite" is intended to refer to those residual FSS's in the system at any time. The FAA does not propose the indefinite retention of any FSS. Currently, all consolidations are scheduled for completion in fiscal year 1994 as defined in the February 17, 1987, FSS Consolidation Plan that was transmitted to the Congress.

Question. Is the FAA committed to Model 1 Full Capacity as its successor to Model 1?

Answer. Yes. The FAA has prepared "Statements of Work" and specifications for Model 1 Full Capacity to modify the E-Systems contract. The contractor has been requested to submit the Model 1 Full Capacity cost and schedule data by June 15, 1987.

Question. Will stations with Model 1 be retrofitted or upgraded to Model 1 Full Capacity, if so on what timetable?

Answer. Yes. Model 1 facilities will be upgraded to Model 1 Full Capacity. Deliveries will begin approximately 25 months after date of contract modification (projected for August 1987).

Question. In FY 88, will new AFSSs be equipped with Model 1 Full Capacity?

If not, does it make sense financially to consolidate into AFSSs with Model 1, and have to retrofit into Model 1 Full Capacity at a latter time?

Answer. Model 1 Full Capacity will not be delivered until late fiscal year 1989; therefore, the equipment will not be available for initial use in any of the AFSS's scheduled for commissioning in FY 1988.

Yes, it is appropriate, from both an operational and financial standpoint, to consolidate into AFSS's equipped with Model 1. Model 1 Full Capacity uses the same hardware and software as Model 1 and the basic difference between the two systems is capacity rather than functional capability. Model 1 Full Capacity provides the capability to accomplish full automation in all 61 AFSS's and supports full consolidation of all existing FSS's. The functional capabilities of both systems will be essentially the same, therefore, transition to Model 1 Full Capacity should be transparent to the user.

On the other hand, consolidation of FSS's into Model 1 equipped AFSS's will provide the benefits of automation to a larger population of pilots in an earlier time period and will enable the FAA to better utilize available resources. This will avoid the need to hire additional personnel and will result in a lower cost per unit of service.

Finally, consolidation into Model 1 equipped AFSS's will enable FAA to maintain current implementation schedules and to keep commitments made to those communities that are providing the new AFSS's.

Question. The Federal Aviation Administration in 1981-2 referred to the Flight Service Station leased A and B equipment as "old, antiquated and inefficient" to handle the increased pilot demands. How can the FAA now request, after $340 million has been spent to improve the system, that the AFSS be consolidated with leased A and B equipment? Shouldn't the stations be consolidated with Model 1 equipment only?

Answer. The "Leased A and B Service" referred to in 1981-2 was the Model 28 Teletypewriter circuits. This has since been updated to a Western Union (now American Satelite) provided Leased A&B Service (LABS). It is semiautomated utilizing Displays and Keyboards. While not a Model 1 AFSS, it can accommodate consolidation and is a more effective use of available resources. We believe it is appropriate to consolidate with LABS.

MICROWAVE LANDING SYSTEMS (REPLACEMENT FOR INSTRUMENT LANDING SYSTEM)

Question. This major part of the NAS Plan--$1.5 billion--will eventually require all aircraft to be equipped with an MLS system, including those who now use ILS. FAA now assumes that MLS and ILS systems will be co-located until at least 1998, however their official plan is to acquire 1,250 MLSs under a complete ILS replacement strategy. FAA is asking for $48.7 million in FY 88 to begin a 500 unit, $572 million second MLS procurement. (178 Units have already been acquired, but not yet located.)

What is FAA's intention with respect to the MLS procurement. Do you intend to review your strategy with respect to this procurement?

Answer. Subject to the approval of funding appropriations, the FAA intends to proceed with a second MLS procurement for 500 systems with the release of the Request for Proposal by about June 30, 1987, and a contract award approximately 1 year later. This is a joint multiyear procurement with DOD, which has identified a requirement for 194 systems from FY-88 through FY-92. A third multiyear procurement is planned for the remaining 572 systems beginning in FY-93.

The MLS Benefit/Cost Study is in the process of being reviewed and updated. Preliminary results confirm again that the MLS program provides a positive benefit/cost ratio. Our strategy, therefore, remains the same with regard to the eventual complete replacement of ILS as stated in the MLS Transition Plan. It is essential that we adhere to our plans so that commitments made to the international community through ICAO will be met.

TERMINAL DOPPLER WEATHER RADAR
(WIND SHEAR DETECTION SYSTEM)

Question: GAO's testimony states that prior to appropriating FY 88 funds for the terminal doppler weather radar, problems must be resolved with respect to outstanding technical issues. Criteria for an "optimal" ground-based low-level wind shear detection system have not yet been met (e.g., 10% or less false alarm rate; 90% probability of detecting all microbursts; ability to scan all runways and flight paths, etc.). Does FAA intend to commit to production of the terminal doppler weather radar prior to demonstrating that the system can work? (NOTE: FAA's request is for $130 million to produce 24 systems.)

Answer: The Terminal Doppler Weather Radar test bed (the functional equivalent of NEXRAD) will be used to demonstrate that the Terminal Doppler Weather Radar (TDWR) will work. The TDWR software package, which will be provided to the TDWR contractor, will be thoroughly tested and demonstrated in the test bed radar prior to TDWR contract award. The TDWR radar is functionally similar to NEXRAD (which has been subjected to full A-109 testing), and the hardware differences are small, as was verified by the two NEXRAD contractors in an analysis completed in 1986 for a C-band version of NEXRAD.

FAA's FAST-TRACK ACQUISITION STRATEGY FOR THE NAS PLAN

QUESTION. This Fast Track strategy for acquiring many of the NAS Plan's major systems involves overlapping development and production phases. (The practice is called "Concurrency.") Problems have arisen because systems have been committed to production contracts before demonstrating that they work. This approach (which was also taken with the Air Force B-1B Bomber) leads to increased technical, operational, and economic risks.

Should FAA have waited until testing and development of major systems was reasonably complete -- especially when dealing with a project that advances the state of the art -- prior to beginning production?

ANSWER. Major systems developed by the FAA generally represent a replacement and expansion of existing systems with modern technology. Rarely do they advance technology or push the state of the art, in contrast to the development of new weapon systems. In those cases where development was necessary prior to production (i.e., HOST and Voice Switching Control System) projects entered full-scale development for demonstration and test prior to production approval. In those cases where development was considered to be mature (i.e., commercial microwave landing systems were already operating) projects entered into production. Thus, the acquisition strategy was tailored to the individual requirements of the project. However, a common problem experienced on these and other Government projects has been software development and documentation, by both large and small contractors. In projects entering directly into production these problems have caused project delays, although the total time to field an acceptable system is still less than if it went through a total development cycle. In addition, the FAA does not accept a major system for operational use until it meets operational requirements as demonstrated through operational test and evaluation.

NAS PLAN DELAYS

QUESTION. GAO's testimony indicates that the 1 to 8 year scheduling delays in the National Airspace System Plan are due to FAA's underestimating the following:

1) the complexity of these highly automated systems;
2) the time needed to develop system software; and
3) the interdependency among the systems.

Do you agree with GAO's conclusions?

ANSWER. Certainly, technical complexity, software development, and system interdependencies have caused delays in implementing the NAS Plan projects. The original NAS Plan was optimistically cast, and unfortunately, did not anticipate the depth of the software management and software integration and computer programming that have been the pacing items getting through the engineering and design problems. Some of our original estimates for software have grown as much as 100 percent.

This past year the FAA has subjected all of the NAS Plan projects to a careful review of their schedules and costs. The NAS Plan now has timetables that use a much more conservative set of engineering estimates of the expected schedule performance that were used in previous updates to the NAS Plan.

Questions Submitted by Senator Cochran

Question. I recently requested all airport managers in Mississippi to provide me with their thoughts on the upcoming reauthorization of the Airport and Airway Trust Fund, and how the fees paid into the fund by my constituents are serving the needs of air transportation in the State.

Nearly all of the responses I have received discuss the need to make more funds available to small commercial service airports and general aviation airports. Seventy of the 77 airports in Mississippi are classified as general aviation airports. More than two-thirds of these 70 airports cannot compete for federal development funds because of the priority system's twenty (20) based aircraft requirement. Although they are receiving no benefits, the users of general aviation airports last year put more than $100 million directly into the trust fund through aviation and jet fuel tax.

Mississippi currently has a backlog of pre-applications for federal assistance in excess of $21 million for development and improvement at 37 general aviation airports. Mississippi is one of 3 states that does not have a state aid development program to assist locations that cannot compete for federal funds.

The Department of Transportation has proposed an initiative to provide state aviation departments with a block grant for development at small commercial service airports and general aviation airports. This program would be beneficial to Mississippi only if current federal strings, such as the priority system's 20-based aircraft requirement were removed. Would the Department's state block grant proposal allow the states to distribute their allotments free of current federal requirements?

Answer. A state receiving a block grant under the Administration's proposal would not be required to administer the program in accordance with the Federal Aviation Administration's (FAA) priority system. While one of the criteria for determining eligibility for a state block grant is that the state uses a programming process acceptable to the FAA, we would not require use of a specific priority system and the state would be free to develop its own.

While Federal requirements under a block grant would be considerably reduced, they would not be totally eliminated. A participating state would have to comply with any standard requirements necessary to protect safety and efficiency of the national system and any compliance requirements necessary to fulfill the purposes of the legislation. Additionally, a state must comply with environmental, civil rights, and uniform relocation and property acquisition requirements.

Question. In the past, Mississippi airports have requested FAA assistance in obtaining instrument landing systems. These requests have been denied on the basis that the FAA was replacing instrument landing systems with microwave landing systems, although the latter are not yet fully developed, and will first be installed at large, primary airports. It has been brought to my attention that FAA now has some funds available for procurment of instrument landing systems, which are vitally needed at several small Mississippi airports. Could you comment on the availability of funds for ILS?

Answer. The FAA has developed a microwave landing system transition policy which addresses the immediate need in the system for ILS on a limited basis. These ILSs may be provided by the FAA either under the FAA's Facilities and Equipment appropriation or from the $5 million of Airport Improvement Program funds which the Congress directed be spent on ILS. However, the total amount to be provided under either program will be limited and sites will be chosen based on their potential to enhance capacity in the National Airspace System.

Question. At my request, your office recently met with the Mayor of Southaven, Mississippi, and others from that city, concerning noise compatibility concerns associated with plans for expanding the Memphis International Airport. I have been informed that your office did find noise compatibility deficiencies in the master plan submitted for the Memphis Airport expansion, and that you have instructed the Airport to make efforts to correct those deficiencies. Will the FAA continue to work with the citizens of Southaven and the Memphis Airport in addressing the noise concerns?

Answer. It was the noise compatibility program submitted by the Memphis Airport to the FAA under FAR Part 150, rather than the master plan regarding proposed expansion, on which the FAA recently commented and noted deficiencies. Subsequent to our meeting with the Mayor of Southaven and other city officials, FAA representatives met with Memphis Airport officials and their consultants to discuss in greater detail our concerns. We have advised airport officials to continue a consultation process with respect to the noise compatibility program with Southaven and the State of Mississippi, as well as with jurisdictions around the airport within the State of Tennessee. The FAA will continue to provide all possible support and advice during the remaining development of this noise compatibility program. In addition, Memphis Airport's expansion proposals will receive thorough FAA environmental review under the National Environmental Policy Act and related laws, which will include consideration of the interests of Southaven and all possible mitigation of adverse noise impacts.

QUESTIONS SUBMITTED BY SENATOR KASTEN

Question. As I am sure you are aware, Sen. Ford, Chairman of the Commerce Committee's Aviation Subcommittee, and others particularly within portions of the industry, have advocated that the FAA be made an independent agency outside of the DOT. What is your opinion of the relative merits of such a proposal?

Answer. The present organizational structure of the FAA has been mandated by Congressional legislation and in that sense I do not believe it is appropriate for me to strongly advocate any particular scheme. Congress will and must be the appropriate decision level on that matter. From a conceptual viewpoint, the FAA as a part of the Department of Transportation permits an integration of all transportation modes from the viewpoint of policy and resource allocation. As with any organizational entity, the more independent the organization is, the greater its flexibility in initiating actions, and dealing with its constituency.

Question: I have received a copy of a letter to Senator Ford from the Association of Flight Attendants relative to their concerns that your departure from the FAA might put at risk numerous initiatives that you have strongly supported in the area of aircraft crashworthiness, evacuation, and in-flight safety. They suggest legislation may be required to ensure that these initiatives are not dropped under a new Administrator. Do you believe that this is a valid concern in which Congress should become involved?

Answer: No, I do not believe that Congressional activity is needed. Our many faceted crashworthiness, evacuation, and in-flight safety initiatives are part of an ongoing, well-publicized program that will continue to receive top priority and support.

Question: The budget adopted last night basically provides a freeze on domestic spending at current levels. Yet, to perform your tasks relative to the operation of the system and the continued timely development of the NAS Plan, you have requested almost $1 billion increase over current levels. Though I guess this is to be the problem of your successor, what does this mean for the various responsibility areas over which the FAA presides?

Answer: A spending freeze at current levels would seriously damage the Federal Aviation Administration's (FAA) operational effectiveness and cause delays in air traffic.

Over three quarters of the Operations appropriation is for payroll costs and a large percentage of the proposed budget increase is for mandatory costs: inflation, the new retirement systems, pay raises, communications, etc. The brunt of cutbacks created by a spending freeze would be borne by employees. This would result in serious employee morale and staffing problems. For the Facilities and Equipment appropriation, major National Airspace System (NAS) Plan projects would have to be deferred or rethought, and the NAS Plan and its program schedules would have to be completely recast.

A spending freeze would trigger the following necessary actions:

- An agencywide hiring freeze, where new hires would be restricted to replacements for attrition in the controller, inspector, and maintenance work forces.
- No increase in controllers despite a 6-percent increase in traffic growth.
- A sharp reduction in permanent change-of-station (PCS) relocations.
- No increase in safety inspectors and security staff in the face of increasing workload requirements.
- Suspension or deferral of within grade and merit promotions.
- Furloughs of 9 to 16 days for each FAA employee.
- Restrictions on travel and training.
- Deferral of all agency initiatives including:
    - Long-range radar replacement program
    - Terminal doppler weather radar program
    - Replacement of obsolete control towers
    - The Advance Automation System
    - Several major NAS Plan projects

QUESTIONS SUBMITTED BY SENATOR HATFIELD

FAA/ADVANCED AUTOMATION SYSTEM

I understand that commercial availability is either required or preferred for the computer graphics procurement for the AAS.

Question: What is FAA's position on this aspect of the procurement?

Answer: FAA's position is that commercially developed products should be used to the maximum extent practical in the design of the AAS. In most cases, this means that commercially available components such as graphics processors are assembled by the AAS prime contractors into larger subsystems like the controller workstations.

Question: Does the commercial availability of the system allow for reduced costs and reliability of the products?

Answer: Commercial availability of components generally results in lower overall costs for prime mission equipments.

Question: How many similar commercial products are currently on the market?

Answer: The availability of commercial products on the market varies widely, depending on the specific product. For example, there is only one supplier for the 20" x 20" color raster scan cathode ray tube which meets all performance requirements at the present time. There are several manufacturers who have graphics generator processors which can be utilized as components of graphics display system.

Question: How will the Committee's directions to thoroughly test the hardware prior to acquisition effect the schedule for deployment of the AAS?

Answer: Six months have been added to the AAS schedules to provide time for the added testing directed by the Committee.

Question: Is a small business (under 500 employees) given any special consideration in the procurement process?

Answer: The AAS acquisition phase contract will require set asides for small and small disadvantaged businesses.

QUESTIONS SUBMITTED BY SENATOR BURDICK

Question. Approximately $33 million have been appropriated by Congress since FY-82 to be awarded to institutions in support of development for Airway Science programs. Have all of these appropriated funds been awarded? Will the FAA be able to support the continued award of additional grant funds?

Answer. All appropriated funds through FY-86 have been awarded. FY-87 appropriated funds of $3,000,000 designated to the University of North Dakota have been awarded. Designated funds in the amount of $2,000,000 for Florida Memorial College will be awarded pending receipt of a grant proposal from the institution. FY-87 competitive funds of $5,000,000 were announced by publication in the Federal Register on February 2, 1987, with an application deadline of May 29, 1987. To be eligible to compete for funding, an institution must have an established FAA recognized Airway Science curriculum in place and available to students. The curriculum must have been recognized by the FAA Administrator no later than December 31, 1986. The FAA has received 19 grant applications requesting a total of $14.8 million in project funding. The FAA expects to announce grant awards by September 30, 1987.

If additional grant funds are appropriated in upcoming fiscal years, FAA anticipates announcing the availability of funds, evaluating proposals, and announcing awards during the fiscal year.

Question. The administration of both the Airway Science Demonstration Project and the Airway Science Grant Program requires resources and staff. Does the FAA budget submission include adequate operating funds for the Airway Science program?

Answer. Three staff years are currently dedicated to the management of the Airway Science Program, including both the Demonstration Project and the Grant Program. In addition, staff efforts are supplemented by $200,000 in contracted agreements for curriculum review, campus site visits, and grant proposal evaluations. Currently, the Airway Science Program is not a separate budget line item. The program costs are included in the Office of Human Resource Management activity. If the program continues to grow, staff year requirements will increase. This is based on anticipated institutional applications for curriculum recognition, recruitment activities, and future appropriated grant funding.

Question. More Airway Science graduates are entering the job market each year. Given the difficulty the FAA has experienced recruiting and hiring air traffic controllers, what efforts are being made to hire Airway Science graduates?

Answer. FAA has already hired 88 air traffic controllers from the Airway Science register as of December 31, 1986. An Airway Science hiring goal of 150 has been set for FY 1987.

Most of these hires are expected to be in the air traffic controller area. The Early Hire Program has been established as a major effort to hire Airway Science graduates as air traffic controllers. This program includes periodic visits to institutions with recognized Airway Science Curriculums by recruiters from our Special Examining Division. These recruiters give the air traffic test to students in the program and counsel them regarding the FAA and making application for Federal employment. The objective of the program is to complete as much of the employment process as possible before the students graduate so they can be employed soon after attaining their degrees.

Question. Why hasn't the Airway Science program been expanded to include continued education for current FAA employees, as it was originally directed by Congress? How will the FAA provide for continued education and development to retain its current experienced air traffic controllers?

Answer. Efforts to expand the Airway Science program to include continued education for current FAA employees are ongoing. A major key to this program is the evaluation of FAA courses for college credit. The American Council on Education (ACE) is presently reviewing approximately 600 FAA courses for credit. It is the major non-governmental body in the U.S. concerned with post-secondary education and maintains a national registry to provide students with transcripts. The FAA courses are published in an annual National Guide to Education Credit for Training Programs. Once published in this national registry, the chances of gaining credit for the courses are greatly increased. A total listing of all FAA credit courses is expected from ACE around July 1. When the listing is received, it will be presented to the University Aviation Association Airway Science Curriculum Committee for recommending credit against the Airway Science Curriculum Courses. These recommendations will be furnished to all recognized airway science institutions and to all FAA employees who have completed any of the courses to be used in determining credit toward airway science degrees. Employees may then contact individual institutions for credits toward airway science degrees and arrange to continue their education.

SUBCOMMITTEE RECESS

Senator LAUTENBERG. I announce now that the subcommittee will adjourn, and we will reconvene on May 13, when we are going to hear from public witnesses on transportation related matters.

Again, thank you all for your patience, and your participation. Admiral Engen, we wish you the best in the years ahead.

[Whereupon, at 12:50 p.m., Friday, May 8, the subcommittee was recessed, to reconvene at 10 a.m., Wednesday, May 13.]

LIST OF WITNESSES, COMMUNICATIONS, AND PREPARED STATEMENTS

Page

Barchi, Thomas, Group Director, Resources, Community and Economic Development Division, General Accounting Office 505
Beam, Richard L., Director, Office of Pipeline Safety, Research and Special Programs Administration 91
  Biographical sketch 121
Boggs, David A., General Manager, Sacramento RT Metro, letter from 338
Boleyn, William, Assistant General Manager for Finance, Washington Metropolitan Area Transit Authority 451
Broderick, Anthony J., Associate Administrator for Aviation Standards, Federal Aviation Administration 535
Butler, Kenneth W., Associate Administrator for Budget and Policy, Urban Mass Transportation Administration 309

Caldwell, Robin A., Director, Office of Aviation Information Management, Research and Special Programs Administration 91
  Biographical sketch 122
Cotton, Charles, Group Director, Resources, Community and Economic Development Division, General Accounting Office 573

D'Amato, Hon. Alfonse M., U.S. Senator from New York, prepared statement .. 17, 310, 508
DelliBovi, Alfred A., Deputy Administrator, Urban Mass Transportation Administration 309
  Letter from 395
Douglass, M. Cynthia, Administrator, Research and Special Programs Administration, statement of 91
  Prepared statement 95
  Biographical sketch 120

Egbert, Jon, Deputy General Manager, Washington Metropolitan Area Transit Authority 451
Engen, Donald D., Administrator, Federal Aviation Administration 535, 605
  Prepared statement 540, 610
  Letter from 634

Gay, Forrest T., Assistant General Manager for Design, Construction and Facilities Maintenance, Washington Metropolitan Area Transit Authority 451
Goldman, Brooks, Associate Administrator for Administration, Federal Aviation Administration 605
Gradison, Heather J., Chairman, Interstate Commerce Commission, statement of .. 1
  Prepared statement 6
  Supplemental statement on *Midtec* Case 21
Guthrie, Edward E., Managing Director, Interstate Commerce Commission 1

Harris, Edward T., Director, Air Traffic Plans and Requirements Service, Federal Aviation Administrastion 535

Page
Harris, Edwin H., Jr., Associate Administrator for Development and Logistics, Federal Aviation Administration 535, 605
Hennigan, John F., Jr., Chief of Policy, Interstate Commerce Commission 1

LaSala, Joseph A., Chief Counsel, Urban Mass Transportation Administration 309
Leopold, Andrea, Senior Evaluator, Information Management and Technology Division, General Accounting Office 573
Lusk, Rear Adm. Clyde T., Chief of Staff, U.S. Coast Guard 167

McLure, Herbert R., Associate Director, Resources, Community and Economic Development Division, General Accounting Office, statement of 505, 573
  Prepared statement 514
McManus, Robert H., Associate Administrator for Grants Management, Urban Mass Transportation Administration 309
Milburn, Lloyd E., Director of Emergency Transportation, Research and Special Programs Administration 91
  Biographical sketch 120
Murtaugh, Capt. Michael O., Chief, Budget Division, U.S. Coast Guard 167

Palmer, Carl, Associate Director, Information Management and Technology Division, General Accounting Office, statement of 573
  Prepared statement 583
Peach, J. Dexter, Assistant Comptroller General, General Accounting Office, letter from 645
Potts, B. Keith, Associate Administrator for Air Traffic, Federal Aviation Administration 535
Pozesky, Martin, Deputy Associate Administrator for Development and Logistics, Federal Aviation Administration 605

Roberts, Alan I., Director, Office of Hazardous Materials Transportation, Research and Special Programs Administration 91
  Biographical sketch 121
Roberts, Louis W., Director, Transportation Systems Center, Research and Special Programs Administration 91
  Biographical sketch 120

Shantz, Art, Evaluator, Resources, Community and Economic Development Division, General Accounting Office 573
Slotsky, Joel, Evaluator, Resource, Community and Economic Development Division, General Accounting Office 505
Stanley, Ralph L., Administrator, Urban Mass Transportation Administration, statement of 309, 451
  Prepared statement 314, 474
  Letter from 397
Stoer, Nicholas S., Director of Budget, Federal Aviation Administration 535

Turner, Carmen E., General Manager, Washington Metropolitan Area Transit Authority, statement of 451
  Prepared statement 458

Weithoner, Charles E., Associate Administrator for Human Resources Management, Federal Aviation Administration 535
Williams, Capt. Kent H., Chief, Programs Division, U.S. Coast Guard 167

Yen, A.M., Associate Administrator for Technical Assistance, Urban Mass Transportation Administration 309
Yost, Adm. Paul A., Jr., Commandant, U.S. Coast Guard, statement of 167
  Prepared statement 170

SUBJECT INDEX

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Page

- Advanced automation system 641, 671, 785, 864
- Airport capacity 680
- Airports program, administration of 747
- Airports, grants-in-aid for 755
- Automated flight service stations 625, 678
  - Consolidation 856
  - Modernization 814
  - Systems integration 640
- Aviation insurance revolving fund 754
- Budget overview 652
- Commuter airline safety 657
- Controllers:
  - Full performance level 553, 728
  - Overtime 664
  - Shortages 554
  - Staffing levels 566, 644, 667
  - Training 669, 750
- Development direction 746
- Direction, staff and support 749
- Drug/alcohol testing 682
- FAA academy 627
- Facilities and equipment 766
- Field maintenance technicians 670
- Headquarters administration 752
- Inspectors 658
  - Quality control 568
  - Training 569, 751
- Loan guarantee 753
- MLS replacement 632, 642, 685, 857
  - Contract 827
- NAS plan:
  - Delays 637, 852, 859
  - Host project 621
  - Individual equipment component 617
  - Integrated systems 618
  - Phasing/testing 618
  - Progress/accomplishments 606
  - Safety 766
  - Satellite technology 642
  - SEI contract 675, 846
- New York TRACON 802
  - Computer upgrade 628, 640

Page
Operations 724
  Air traffic 729
  Aviation security 742
  Aviation standards 739
  Installation and materiel 734
  Leased telecommunications 736
Penalties 570
Research, engineering and development 693
Trust fund 663, 723
  Balances 853

GENERAL ACCOUNTING OFFICE

AAS 581
  Alternatives 592
  Program description 583
AWOS 578
FAA's response to increase in traffic 509, 514
  Central flow control 529
  Controller workload 510, 526, 528, 601
  Facilities maintenance 512, 520, 530
  Inspector work force 511, 519
  Measuring aviation safety 513, 521, 527, 601
  Near misses 531
FSS consolidation program 577
Microwave landing system 577
NAS plan 575, 594
  Delays 576, 596, 601
  Productivity gains 599
New York TRACON 581, 589
TCAS 603
Terminal Doppler weather radar 576

INTERSTATE COMMERCE COMMISSION

Abandonments 66
  Effects of 24
Agency, termination of 15
Commission sunset 16, 27
Competitive access 44
Cost controls 71
Midtec case 20
Motor carrier economic regulation 17
Rate reasonableness 58
Revenue adequacy 27, 65
  Asset valuation 73
  Cost recovery 74
Staggers Act 23
Truck data 78
Trucking insurance 36

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

GPS research 148

Hazardous materials:

  Accidents 123
  Inspection/enforcement 135, 140, 144, 152, 164
  Port inspections 145
  Registration 124, 158

Page
- State regulations ... 162
- Transportation safety record ... 123
- Violations ... 165

Pipeline:
- Inspector qualifications ... 127, 132
- Intrastate safety ... 153
- Mississippi accidents ... 130
- Safety ... 149
- Safety grant program ... 163
- Transportation of PCB's ... 125

Regulatory backlog ... 146
Safety data ... 140
Transportation systems center ... 155

URBAN MASS TRANSPORTATION ADMINISTRATION

Bus fleet management ... 399
Contracting-out services savings ... 337
Formula grants ... 402
Funding:
- Impact on elderly and disadvantaged ... 331
- Reverse commute ... 332

Grants management information system ... 401
Interstate substitution program ... 392, 436
New starts ... 361, 430
Planning funds ... 391
Privatization ... 362, 365
- Appropriation language ... 336

Project management oversight ... 337, 365, 444
Quarterly grant release process ... 378
Rail modernization study ... 341, 366
Regulations:
- Alcohol/drug abuse ... 338
- Charter bus ... 344, 349, 447
- Transit safety issues ... 368

Research projects ... 387
Rural transit assistance program ... 424, 441
Safety inspections ... 340
User fees ... 333
WMATA winterization program ... 355

U.S. COAST GUARD

A-76 contracting ... 233
Acquisition, construction and improvements ... 263
Acquisition reform ... 236
Alcohol/drug rules ... 251
Boat safety ... 297
Bridges, alteration of ... 289
Cutter procurement ... 216
Defense readiness ... 198
Drug interdiction ... 195, 199, 301
- Drug enforcement ... 221, 224
- Goals/measures ... 206, 212
- Level of effort ... 300

E-2C operations ... 178
Governor's Island drug task forces ... 182, 304

Page
Law enforcement detachment program 177
    Drug seizures 178
Reserve training 291
Ocean pollution control 190
Oil spill prevention study 214, 296
Operating expenses 252
Patrol boats 205
    Replacement 246
Polar icebreaker acquisition 210
Port safety 201
Research and development 240
Reserve training 238
User fees 185

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

Completion of 103-mile system 464, 491
Full funding agreement 454, 460, 484, 493, 503
Future rehabilitation/replacement costs 466
Metrorail update 452
    Goals 457
Operating subsidies 503
Operating lines 453
Project management oversight 490, 501
Rail construction program 458
Snow 465, 500